SHARP

VCR/DVD COMBINATION

MODEL

DV-NC230S(B)

OPERATION MANUAL

Please read this Operation Manual carefully before using your VCR/DVD COMBINATION.

RW COMPATIBLE

The region number for this VCR/DVD is **2**.

DVD VIDEO · DIVX VIDEO · COMPACT disc DIGITAL AUDIO · COMPACT disc DIGITAL VIDEO · VIDEO CD · COMPACT disc ReWritable · COMPACT disc Recordable · DOLBY DIGITAL · dts DIGITAL OUT · VHS PAL · MP3 · Kodak Picture CD COMPATIBLE

PRECAUTIONS

SAFETY INFORMATION

This apparatus complies with the requirements of Council Directives 89/336/EEC and 73/23/EEC as amended by Council Directive 93/68/EEC.

Dieses Gerät entspricht den Anforderungen der EG-Richtlinien 89/336/EWG und 73/23/EWG mit Änderung 93/68/EWG.

Ce matériel répond aux exigences contenues dans les directives 89/336/CEE et 73/23/CEE modifiées par la directive 93/68/CEE.

Dit apparaat voldoet aan de eisen van de richtlijnen 89/336/EEG en 73/23/EEG, gewijzigd door 93/68/EEG.

Dette udstyr overholder kravene i direktiv nr. 89/336/EEC og 73/23/EEC med tillæg nr. 93/68/EEC.

Quest' apparecchio è conforme ai requisiti delle direttive 89/336/EEC e 73/23/EEC, come emendata dalla direttiva 93/68/EEC.

Αυτή η συσκευή συμμορφώνεται με τις απαιτήσεις των οδηγιών του Συμβουλίου 89/336/ΕΟΚ και 73/23/ΕΟΚ όπως τροποποιήθηκαν από την οδηγία του Συμβουλίου 93/68/ΕΟΚ.

Este equipamento obedece às exigências das directivas 89/336/CEE e 73/23/CEE, na sua versão corrigida pela directiva 93/68/CEE.

Este aparato satisface las exigencias de las Directivas 89/336/CEE y 73/23/CEE, modificadas por medio de la 93/68/CEE.

Denna utrustning uppfyller kraven enligt riktlinjerna 89/336/EEC och 73/23/EEC så som kompletteras av 93/68/EEC.

Dette produktet oppfyller betingelsene i direktivene 89/336/EEC og 73/23/EEC i endringen 93/68/EEC.

Tämä laite täyttää direktiivien 89/336/EEC ja 73/23/EEC vaatimukset, joita on muutettu direktiivillä 93/68/EEC.

Bu cihaz Konsey Direktifi 93/68/EEC tarafından düzeltilen 89/336/EEC ve 73/23/EEC Konsey Direktiflerinin gerekliliklerine uygundur.

Tento přístroj je v souladu s požadavky směrnic rady 89/336/EEC a 73/23/EEC, tak jak byly upraveny směrnicí rady 93/68/EEC.

See seade on vastavuses Nõukogu Direktiivis nr 89/336/EEC ja 73/23/EEC esitatud nõuetega, vastavalt Nõukogu Direktiivis nr 93/68/EEC esitatud parandustele

Ez a készülék megfelel a Tanács által kiadott, 89/336/EGK és 73/23/EGK Irányelveknek és az utóbbit módosító 93/68/EGK Irányelvnek

Ši ierice atbilst tehniskam prasibam pec 89/336/EEC un 73/23/EEC direktivam papildinats ar direktivu 93/68/EEC.

Šis prietaisas atitinka ES Tarybos direktyvu 89/336/EEC ir 73/23/EEC patikslintos direktyvos 93/68/EEC reikalavimus.

To urządzenie spełnia wymagania dyrektyw 89/336/EEC i 73/23/EEC wraz z poprawkami dyrektywy 93/68/EEC.

Tento prístroj je v súlade s požiadavkami smerníc rady 89/336/EEC a 73/23/EEC tak ako boli upravené smernicou rady 93/68/EEC.

Ta aparat je v skladu z zahtevami Direktiv Sveta 89/336/EEC in 73/23/EEC kot je navedeno v dopolnilu k Direktivi Sveta 93/68/EEC.

NOTE:
This VCR/DVD can be used only where the power supply is AC 220 V-240 V, 50 Hz. It cannot be used elsewhere.

CAUTION:
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

AS THE LASER BEAM USED IN THIS VCR/DVD IS HARMFUL TO THE EYES, DO NOT ATTEMPT TO DISASSEMBLE THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPARATUS TO DRIPPING OR SPLASHING, NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD BE PLACED ON THE APPARATUS.

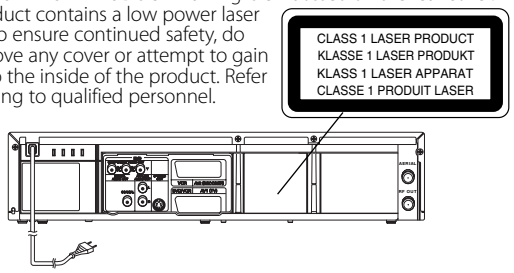
Laser Diode Properties

Material:	**GaAs**
Wave length:	**DVD: 655 nm**
	CD: 790 nm
Emission Duration:	**Continuous**
Laser output:	**Max. 0.8 mW**

Power Cord Protection

To avoid any malfunctions of the VCR/DVD, and to protect against electric shock, fire or personal injury, please observe the following.

- Hold the plug firmly when connecting or disconnecting the AC power cord.
- Keep the AC power cord away from heating appliances.
- Never put any heavy object on the AC power cord.
- Do not bundle any cables such as; AC power cord, Round Coaxial cable or other cables that are used to connect this VCR/DVD to your TV together. The noise or disturbance of the picture may be generated.
- Do not attempt to repair or reconstruct the AC power cord in any way.
- This VCR/DVD is classified as a CLASS 1 LASER product.
- The CLASS 1 LASER PRODUCT marking is embossed on the rear cover.
- This product contains a low power laser device. To ensure continued safety, do not remove any cover or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.



Location and Handling

- Do not stand the VCR/DVD vertically. Install the VCR/DVD in a horizontal and stable position. Do not place anything directly on top of the VCR/DVD. Do not place the VCR/DVD directly on top of the TV.
- Depending on the TV, noise or disturbance of the picture and/or sound may be generated if the VCR/DVD is placed too close to your TV. In this case, please ensure enough space between your TV and the VCR/DVD.
- Do not cover or place the VCR/DVD in enclosed spaces to prevent excessive temperature build up.
- Do not place the VCR/DVD in direct sunlight, or near heat sources.
- Depending on the environment, the temperature of the VCR/DVD may increase slightly. **This is not a malfunction.**
- Keep the VCR/DVD away from strong magnetic objects.
- Do not place any object containing water or other liquids on the VCR/DVD. In the event that liquid should enter the cabinet, unplug the VCR/DVD immediately and contact the retailer or service centre approved by SHARP immediately.
- Do not remove the VCR/DVD cabinet. Touching parts inside the cabinet could result in electric shock and/or damage to the VCR/DVD. For service and adjustment inside the cabinet, call a qualified dealer or service centre approved by SHARP.
- Be sure to remove a disc and video tape and unplug the AC power cord from the output before carrying the VCR/DVD.

Nonuse Periods

- When the VCR/DVD is not being used, switch the VCR/DVD to the standby mode.
- When left unused for a long period of time, the VCR/DVD should be unplugged from the household AC outlet.

No Fingers or Other Objects Inside

Do not put your fingers or objects on the disc tray or in the cassette compartment.

Warning of Dew Formation

Moisture may form inside the VCR/DVD under the following conditions:

- Immediately after a heater is turned on.
- In a steamy or humid room.
- When the VCR/DVD is suddenly moved from a cold to warm environment. If moisture forms inside this VCR/DVD, it may not operate properly or damage the video tape. In such case, turn on the power and wait for more than 2 hours for the moisture to evaporate.

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Symbols Used in This Manual

The following symbols appear in some headings and notes in this manual.

Description refers to playback or recording of video cassette tapes.

Description refers to playback of DVD Video discs (including DVD-RW/-R and DVD+RW/+R discs (Video mode only)).

Description refers to playback of VR mode (Video Recording format). The VR mode (Video Recording format) is a recording mode to enjoy editing the programme or manual mode for recording in desired resolution and time.

Description refers to playback of discs formatted with DivX®.

Description refers to playback of Audio CDs.

Description refers to playback of Video CDs.

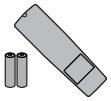
Description refers to playback of Video CDs without PBC function.

Description refers to playback of MP3 discs.

Description refers to viewing of JPEG discs.

Supplied Accessory

- Remote control with two R-6 batteries



- Round Coaxial cable

- Operation manual

Copyright

Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Please refer to relevant laws in your country.

Copy Protection

This VCR/DVD supports Macrovision copy protection.

On DVD discs that include a copy protection code, if the contents of the DVD disc are copied using a VCR, the copy protection code prevents the videotape copy from playing normally.

U.S. Patent Nos. 4,631,603; 4,577,216; 4,819,098; 4,907,093; 5,315,448; and 6,516,132.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorised by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision. Reverse engineering or disassembly is prohibited.

Notice for Progressive Scan Outputs

Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of picture problems with 525 or 625 progressive scan output, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this 525p or 625p DVD player, please contact our customer service centre.

"Licensed under one or more of U.S. Pat. 4,972,484, 5,214,678, 5,323,396, 5,530,655, 5,539,829, 5,544,247, 5,606,618, 5,610,985, 5,740,317, 5,777,992, 5,878,080, or 5,960,037."

If There Is Noise Interference on the TV While a Broadcast Is Being Received

Depending on the reception condition of the TV, interference may appear on the TV monitor while you watch a TV broadcast and the VCR/DVD is left on. This is not a malfunction of the VCR/DVD or the TV. To watch a TV broadcast, turn off the VCR/DVD.

PAL/MESECAM

- This VCR/DVD can be played as MESECAM system when in MESECAM position. (See "Playback" section.)
- Playback a tape recorded with SECAM broadcasts in Middle East areas are possible on this VCR/DVD.
- When a recorded tape with a SECAM-VHS appliance or a SECAM recorded tape is replayed with this appliance, black and white pictures are produced.
- This appliance cannot be used in France: a SECAM system appliance must be used instead.

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

"DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

"Kodak Picture CD COMPATIBLE" is a trademark of Eastman Kodak Company.

DVD is a trademark of DVD Format/Logo Licensing Corporation.

DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

For Customer Use:

Read carefully the information located at the bottom of your VCR/DVD and enter below the Serial No. Retain this information for future reference.

Model No.: VCR/DVD COMBINATION: DV-NC230S(B)

Serial No.: _____

Maintenance

SERVICING

1. Please refer to relevant topics in the "Troubleshooting Guide" on page 36 before returning the product.
2. Do not attempt to service this VCR/DVD yourself. Instead, unplug it and contact a SHARP Approved Service Centre for inspection.
3. Be sure the service technician uses authorised replacement parts or their equivalents. Unauthorised parts may cause fire, electrical shock, or other hazards.
4. Following any service or repair, be sure the service technician performs safety checks to certify that this VCR/DVD is in safe operating order.

CLEANING THE CABINET

- Use a soft cloth slightly moistened with a mild detergent solution. Do not use a solution containing alcohol, spirits, ammonia or abrasive.

CLEANING DISCS

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the centre out. Do not wipe in a circular motion.
- Do not use solvents such as benzine, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analogue records.

RECOMMENDED MEASURES FOR OPTIMUM PICTURE EXCELLENCE

This VCR/DVD is a precision device constructed using extremely accurate technology.

- The disc cannot be played if the disc drive component is worn out or if the internal pick up lens is dirty.
- If this VCR/DVD still does not perform properly although you refer to the relevant sections and to "Troubleshooting Guide" on page 36, the laser optical pickup unit may be dirty. Consult a SHARP Approved Service Centre for inspection and cleaning of the laser optical pickup unit.

Soiling or friction affecting the pickup lens or disc drive can impair the image quality. At the worst, neither video nor audio will be played back. To maintain optimum picture quality, the Player should be serviced (cleaned and replacement of some parts) every 1,000 hours. Note that this period varies depending on the environment (temperature, humidity, dust, etc.) in which the unit is used. Contact your authorised SHARP supplier for details.

DISC HANDLING

- When you handle a disc, hold it by its edge and try not to touch the surface of the disc.
- Always store a disc in its protective case when it is not used.

AUTO HEAD CLEANING

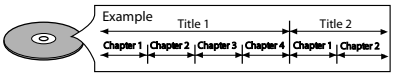
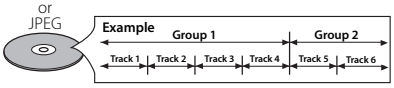
- Automatically cleans video heads as you insert or remove a cassette, so you can see a clear picture.
- Playback picture may become blurred or interrupted while the TV programme reception is clear. Dirt accumulated on the video heads after a long period of use, or the usage of rental or worn tapes can cause this problem. If a streaky or snowy picture appears during playback, the video heads in your VCR/DVD may need to be cleaned.

1. Please visit your local Audio/Video store and purchase a good quality VHS Video Head Cleaner.
2. If a Video Head Cleaner does not solve the problem, please contact to a SHARP Approved Service Centre.

Hint

- Remember to read the instructions along with the video head cleaner before use.
- Clean video heads only when problems occur.

Playable Media

Playable media	Mark (logo)	Region code	Recorded signals	Media size	Tape speed and Disc types
Video Cassettes *1	VHS PAL	—	Analogue video with audio	Tape width 12.65 mm	SP : 23.39 mm/sec. LP : 11.70 mm/sec.
DVD-Video *1, 2, 3	DVD VIDEO, DVD VIDEO	2 or ALL	Digital video (MPEG2) or DivX®	12 cm or 8 cm	
DVD-RW DVD-R * 1, 3, 4, 5, 6, 8, 9, 11, 12	DVD RW, DVD RW, DVD R, DVD R	—			
DVD+RW DVD+R * 1, 3, 4, 5, 7, 8, 9	RW DVD+ReWritable, RW DVD+R	—	Digital video (MPEG2)	12 cm	
Video CD * 3, 5	COMPACT disc DIGITAL VIDEO, VIDEO CD	—	Digital video with audio	12 cm or 8 cm	Video CD or Audio CD
Audio CD * 3, 5, 10	COMPACT disc DIGITAL AUDIO	—	Digital audio		
CD-RW CD-R * 3, 4, 5, 8, 9, 10, 11, 12	COMPACT disc DIGITAL AUDIO ReWritable, COMPACT disc DIGITAL AUDIO Recordable, COMPACT disc ReWritable, COMPACT disc Recordable	—	DivX® or Digital audio or MP3 or JPEG		DivX® or MP3 or JPEG 
Kodak Picture CD	Kodak Picture CD COMPATIBLE	—	JPEG	12 cm	

If you cannot play back a disc which bears one of the marks above, check the following notes.

*1: This VCR/DVD conforms to the PAL colour system. Also you can play medias recorded with the NTSC system and the video cassettes recorded with the MESECAM system via a PAL system TV set.

*2: Certain DVD-Video discs do not operate as described in this manual due to the intentions of the disc's producers.

*3: Scratched or stained discs may not be played back.

*4: Some discs cannot be played back because of incompatible recording conditions, characteristics of the recorder or special properties of discs.

*5: You can play back discs which bear the marks above. If you use nonstandardised discs, this VCR/DVD may not play them back. Even if they are played back, the sound or video quality will be compromised.

*6: Depending on the recording status of a disc, the disc may not be played back at all or normally (the picture or sound may not be smooth, etc.). In this case, you need to finalise the disc with the DVD recorder. Refer to the manual accompanying the DVD recorder.

*7: Only the discs recorded in the video format and finalised can be played back. Unfinalised discs cannot be played back. Depending on the recording status of a disc, the disc may not be played back at all or the picture or sound may not be smooth, etc.

*8: If the recorded portion of the disc is too small (less than 55 mm across), it may not play back properly.

*9: Do not glue paper or put stickers on to the disc. These may damage the disc, and the VCR/DVD may not read it correctly.

*10: Also DTS CD is available when the VCR/DVD is connected to the DTS decoder.

*11: Official DivX Certified™ product; Plays DivX® 5, DivX® 4, DivX® 3, and DivX® VOD video content (in compliance with DivX Certified™ technical requirements).

*12: Discs containing the DivX® files with the DivX® GMC (Global Motion Compensation) playback feature, which is DivX® supplemental function, cannot be played back on this unit.

RW COMPATIBLE :This label indicates playback compatibility with DVD-RW discs recorded in VR mode (Video Recording Format).

Hint
- This VCR/DVD cannot play back the DVD-RW/-R recorded of the once-copy programmes.
- This VCR/DVD cannot play back the DVD-R discs recorded in VR mode (Video Recording Format).
- 8 cm disc is not available on some media.

About the PBC Function of Video CD

This VCR/DVD conforms to ver.1.1 and ver.2.0 of Video CD standard, with PBC function.

Ver.1.1 (without PBC function): You can enjoy playback picture as well as music CD.

Ver.2.0 (with PBC function): When using a Video CD with PBC function, "Pbc" appears on the display.

What is PBC? "PBC" stands for the Playback Control. You can play interactive software using a menu screens. Refer to instructions of Video CD.

Unplayable Media

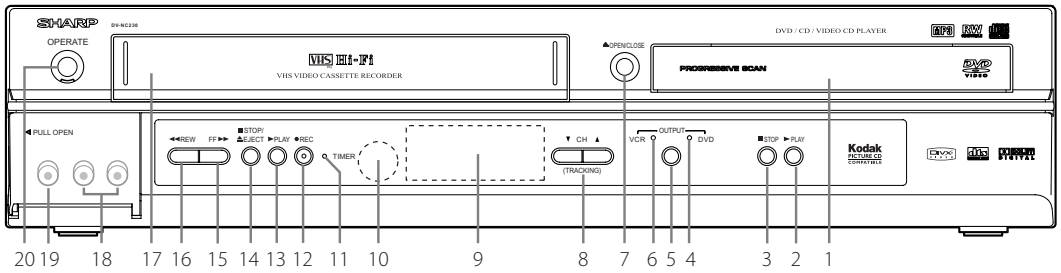
- **NEVER play back the following discs. Otherwise, malfunction may result!**
  DVD-RAM, CD-I, Photo CD, DVD with region codes other than 2 or ALL, DVD-ROM for personal computers, CD-ROM for personal computers
- **On the following disc, the sound MAY NOT be heard.**
  Super Audio CD
- **Any other discs without compatibility indications.**

Hint
- Only the sound recorded on the normal CD layer can be delivered. The sound recorded on the high density Super Audio CD layer cannot be delivered.

SETUP

FUNCTIONAL OVERVIEW

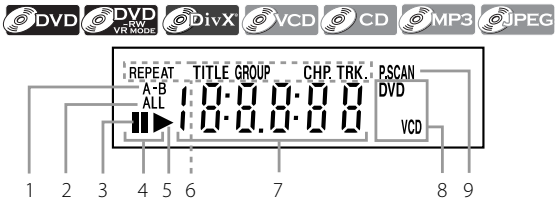
Front Panel



1. **Disc Tray**
2. **PLAY (DVD)**
   To begin disc playback.
3. **STOP (DVD)**
   To stop playback.
4. **DVD OUTPUT Indicator**
   The indicator is on when this VCR/DVD is in the DVD mode. Make sure that this indicator is on before using the DVD player.
5. **OUTPUT**
   To select the DVD mode or VCR mode.
6. **VCR OUTPUT Indicator**
   The indicator is on when this VCR/DVD is in the VCR mode. Make sure that this indicator is on before VCR operation.
7. **OPEN/CLOSE (DVD)**
   To open or close the disc tray.
8. **CHANNEL**
   To change TV channels.
   To adjust the tracking manually during VCR playback.
9. **Display**
10. **Remote Sensor**
11. **TIMER Indicator**
    The indicator is on when the VCR/DVD is in timer standby mode for a Timer Recording or during a One Touch Recording.
12. **REC (VCR)**
    Press once to start recording or repeatedly to start One Touch Recording. The indicator is on during recording.
13. **PLAY (VCR)**
    To begin tape playback.
14. **STOP/EJECT (VCR)**
    To stop playback.
    To eject the tape in the stop mode.
15. **FF (VCR)**
    To fast forward the tape.
16. **REW (VCR)**
    To rewind the tape.
17. **Cassette Compartment**
18. **AUDIO IN Jacks (AV3 / VCR only)**
    Connect an audio cable coming from the audio out jacks of a camcorder, another VCR, or an audio source here.
19. **VIDEO IN Jack (AV3 / VCR only)**
    Connect a video cable coming from the video out jack of a camcorder, another VCR or an audio-visual source (laser disc player, video disc player, etc.) here.
20. **OPERATE**
    To turn the VCR/DVD on or off.
    The indicator is on when this VCR/DVD is turned on.

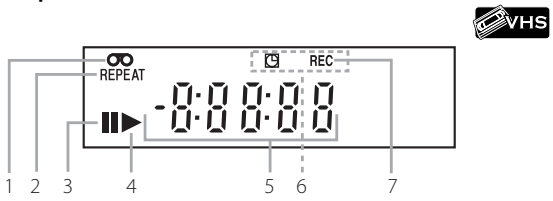
Display

DVD Output Mode



1. Lights up when the A-B repeat function is on.
2. Lights up when the ALL repeat function is on.
3. Lights up when the inserted disc comes to a pause.
4. Lights up when playing back in slow mode (DVD or Video CD).
5. Lights up when the inserted disc is being played back.
6. Lights up when the repeat function is on.
7. Displays how long the current title or track has been played back. When a chapter or track is switched, the number of a new title, chapter or track is displayed.
8. Displays a type of the disc which is inserted on the tray.
   - DVD : DVD, DivX® on DVD
   - CD : DivX® on CD, Audio CD, MP3, JPEG, Kodak Picture CD
   - VCD : Video CD
9. Lights up when the progressive scan system is activated.

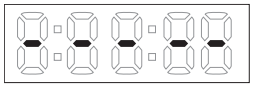
VCR Output Mode

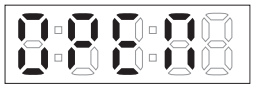


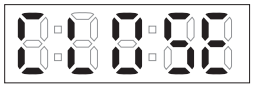
1. *Lights up when a tape is in the VCR/DVD.
2. Lights up during playback when the repeat function is on.
3. Lights up when the playback is in still or slow mode.
4. Lights up when the inserted cassette is being played back.
5. Works as a tape counter (hour, minute, second). Also displays a channel number, tape speed, remaining time for OTR or current time.
6. *Lights up when the Timer Recording or an OTR recording has been set.
7. *Lights up during a recording. Flashes when a recording is paused.

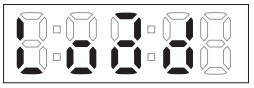
* , and REC mark will disappear when you set VCR/DVD in DVD mode. However, the function indicated by each mark is still working.

Display During Operation

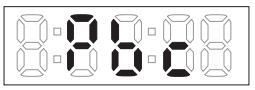

No disc inserted / cannot read disc.


Appears when the disc tray is opening.

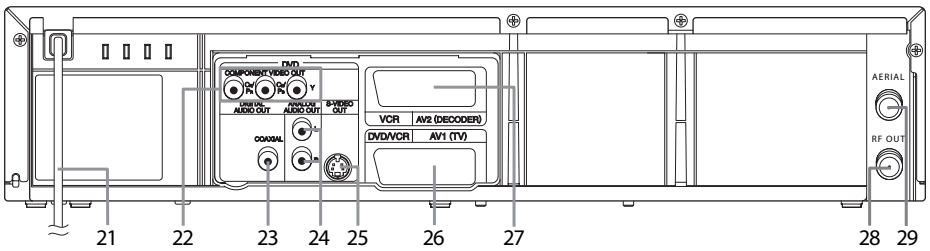

Appears when the disc tray is closing.


Appears when a disc is loaded on the disc tray.

Appears when a disc or tape is being played back.


Appears when the PBC function is activated (Video CD playback only. Refer to page 5).

Rear Terminals



21. MAIN (AC power cord)
Connect to a standard AC plug.

22. COMPONENT VIDEO OUT Jacks (DVD only)
Connect optional component video cable here through the component video input jacks of a TV.

23. COAXIAL DIGITAL AUDIO OUT Jack (DVD only)
Connect to a compatible Dolby Digital receiver.
Use to connect to a Dolby Digital, DTS, or MPEG decoder.

24. ANALOG AUDIO OUT Jacks (Left/Right) (DVD only)
Connect to the audio input jacks of A/V-compatible TV.

25. S-VIDEO OUT Jack (DVD only)
Use the S-video cable to connect this jack to the S-video input jack on your A/V-compatible TV or wide screen TV for a higher quality picture.

26. EURO AV1 (TV) Terminal
Use the scart cable to connect this terminal to the 21-pin scart terminal on your A/V-compatible TV or wide screen TV for a best quality picture.

27. EURO AV2 (DECODER) Terminal (VCR only)
Use the scart cable to connect this terminal to the 21-pin scart terminal on your decoder.

28. RF OUT Jack
Use the supplied Round Coaxial cable to connect this jack to the AERIAL jack on your TV.

29. AERIAL Jack
Connect your antenna, cable box, or direct broadcast system.

VCR/DVD SWITCHING

Because this product is a combination of a VCR and a DVD player, you must select first which component you wish to operate with **OUTPUT**.

VCR MODE

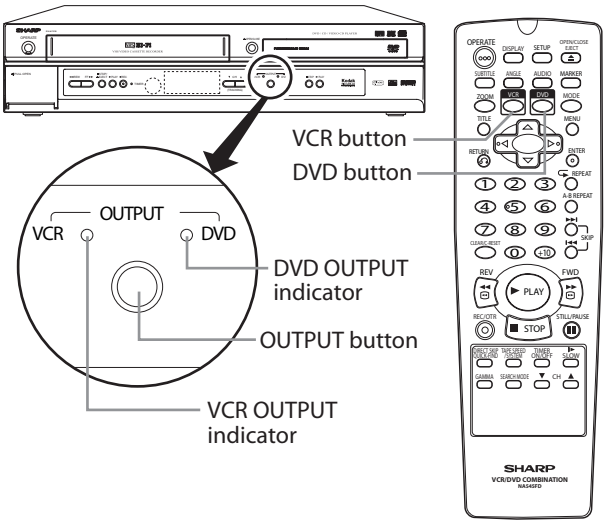
Press **VCR** on the remote control.
(Verify that the VCR OUTPUT indicator is lit.)

DVD MODE

Press **DVD** on the remote control.
(Verify that the DVD OUTPUT indicator is lit.)

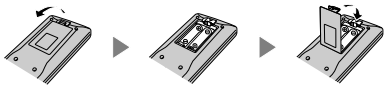
Hint

- Pressing only **OUTPUT** on the front panel DOES NOT switch the mode of the remote control. You MUST select the correct mode on the remote control.
  In the wrong mode, the VCR/DVD does not respond to your commands correctly. Before starting your desired operation, select the correct mode by following the instruction (VCR press first. or DVD press first.) under the subject heading.

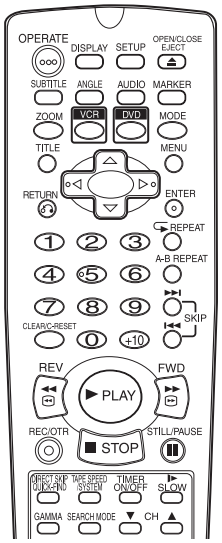


Installing the Batteries for the Remote Control

Install two AA size (R-6) batteries (supplied) matching the polarity indicated inside battery compartment of the remote control.



Hint
- Do not mix alkaline and manganese batteries.
- Do not mix old and new batteries.

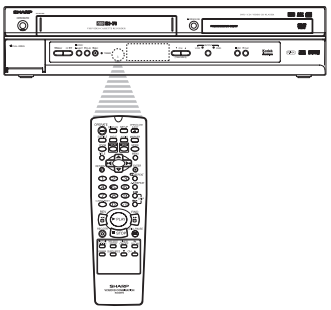


Operable Range

Keep in mind the following when using the remote control:

- Make sure that there is no obstacle between the remote control and the remote sensor on the VCR/DVD.
- The maximum operable range as follows;

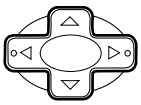
Beeline:	approximately 7 m (23 feet)
Either side of centre:	approximately 5 m (16 feet) within 30 degrees
Above:	approximately 5 m (16 feet) within 15 degrees
Below:	approximately 3 m (10 feet) within 30 degrees



Buttons for DVD Only

Button (Alphabetical order) / Media type	DVD mode		
	DVD, DVD-RW VR MODE	DivX	VCD, CD, MP3, JPEG
A-B REPEAT	• Repeats playback of a selected section.	• Repeats playback of a selected section.	• Repeats playback of a selected section (VCD, CD).
ANGLE	• Press to change the camera angle to see the sequence being played back from a different angle (DVD-Video).	—	—
DVD	• Press to select DVD output mode and to use the remote control in DVD mode.	• Press to select DVD output mode and to use the remote control in DVD mode.	• Press to select DVD output mode and to use the remote control in DVD mode.
ENTER	• Press to accept a setting.	• Press to accept a setting.	• Press to accept a setting.
GAMMA	• Press to adjust the black parts of the picture brighter.	• Press to adjust the black parts of the picture brighter.	• Press to adjust the black parts of the picture brighter (VCD).
MARKER	• Press to call back the Marker display.	—	• Press to call back the Marker display (VCD, CD).
MODE	• Activates Virtual Surround or Rapid Play.	—	• Activates programmed playback, random playback or folder playback mode (CD, MP3, JPEG). • Activates the 3D sound (VCD, CD) .
REPEAT	• Repeats playback of the current disc, title or chapter.	• Repeats playback of the current disc, group or track.	• Repeats playback of the current disc, group or track.
RETURN	• Returns to the previous operation.	• Returns to the previous operation.	• Returns to the previous operation.
SETUP	• Press to enter the setup mode or to change setup items.	• Press to enter the setup mode or to change setup items.	• Press to enter the setup mode or to change setup items.
SKIP	• Press to skip chapters or titles.	• Press to skip tracks.	• Press to skip tracks.
SUBTITLE	• Press to select a desired subtitle language.	• Press to select a desired subtitle language.	—
TITLE	• Displays the title menu.	• Press to return to the first hierarchy in the programme and file list when the file list is the second hierarchy or deeper.	• Press to return to the first hierarchy in the programme and file list when the file list is the second hierarchy or deeper (MP3, JPEG).
ZOOM	• Enlarges part of a DVD-reproduced image.	• Enlarges part of a reproduced image.	• Enlarges part of a reproduced image (VCD, JPEG).

Buttons for Both VCR and DVD

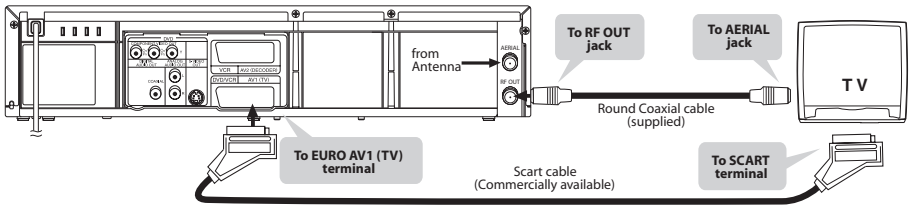
Media type / Button (Alphabetical order)	DVD mode			VCR mode
	DVD, DVD-RW VR MODE	DivX	VCD, CD, MP3, JPEG	VHS
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ +10	• Press to select chapter or title directly.	• Press to select track directly.	• Press to select track directly.	• Press to select channel. (except for +10 key)
	• (up/down/left/right) Press to select an item in the menu and to move the cursor.	• (up/down/left/right) Press to select an item in the menu and to move the cursor.	• (up/down/left/right) Press to select an item in the menu and to move the cursor.	• (up/down/left/right) Press to select an item in the menu and to move the cursor.
AUDIO	• Press to select a desired audio language or sound mode.	• Press to select a desired audio language or sound mode.	• Press to select a desired sound mode (VCD, CD).	• Press to select a desired sound mode.
▼ CH ▲	—	—	—	• Press to change TV channels or to adjust the tracking manual.
CLEAR/C-RESET	• Press to clear the markers or the incorrect input.	• Press to clear the incorrect input.	• Press to clear the markers or the incorrect input.	• Press to reset the counter.
DIRECT SKIP QUICK-FIND	• Press to search chapter, title or time.	• Press to search track or time.	• Press to search track. • Press to search time (VCD, CD).	• Press to skip to the beginning of the next programme.
DISPLAY	• Press to display the current playback mode.	• Press to display the current playback mode.	• Press to display the current playback mode.	• Press to display the current time, tape counter and channel number.
FWD	• Press to begin fast forward playback to a desired point. • Press to begin slow forward playback during the pause mode.	• Press to begin fast forward playback to a desired point. • Press to begin slow forward playback during the pause mode.	• Press to begin fast forward playback to a desired point (VCD, CD, MP3). • Press to begin slow forward playback during the pause mode (VCD).	• Fast forwards playback to a desired point. • Press to forward in slow motion faster.
MENU	• Press to display the DVD menus.	• Press to display the file lists.	• Press to display the MP3 or JPEG file lists.	• Press to display the VCR menu.
OPEN/CLOSE EJECT	• Press to insert discs into or remove them from the tray.	• Press to insert discs into or remove them from the tray.	• Press to insert discs into or remove them from the tray.	• Press to remove the tape from the VCR.
OPERATE	• Press to turn the power on and off.	• Press to turn the power on and off.	• Press to turn the power on and off.	• Press to turn the power on and off.
► PLAY	• Press to begin playback.	• Press to begin playback.	• Press to begin playback.	• Press to begin playback.
REC/OTR	—	—	—	• Press once to start recording or repeatedly to start One Touch Recording.
REV	• Press to begin fast reverse playback to a desired point. • Press to begin slow reverse playback during the pause mode.	• Press to begin fast reverse playback to a desired point.	• Press to begin fast reverse playback to a desired point (VCD, CD, MP3).	• Fast reverse playback to a desired point. • Press to reverse in slow motion slower.
SEARCH MODE	—	—	—	• Press to call up the index or time search menu.
SLOW	—	—	—	• Press to view the video tape in slow motion.
STILL/PAUSE	• Press to pause playback or to advance playback one frame at a time.	• Press to pause playback or to advance playback one frame at a time.	• Press to pause playback.	• Press to pause playback or recording or to advance playback one frame at a time.
■ STOP	• Press to stop playback.	• Press to stop playback.	• Press to stop playback.	• Press to stop playback or recording.
TAPE SPEED SYSTEM	—	—	—	• Press to select the VCR's recording speed (SP or LP). • To change the VCR system for matching recorded system (AUTO, PAL or MESECAM).
TIMER ON/OFF	—	—	—	• Press to put the VCR into stand-by mode for a Timer Recording.
VCR	—	—	—	• Press to select VCR output mode and to use the remote control in VCR mode.

Connection to a TV

CAUTION:

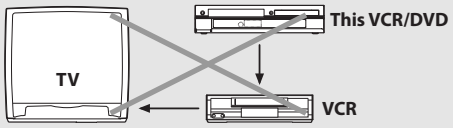
- Be sure to turn off the VCR/DVD and equipment to be connected before connecting.
- Read through the Operation Manual for the equipment to be connected.
- Be sure to keep the VCR/DVD connection cables separate from the TV antenna cable when you install the VCR/DVD, because it may cause electrical interference when you are watching television programmes.

Basic TV connection



CAUTION:

- Connect the VCR/DVD directly to the TV. Do not connect the VCR/DVD to a VCR, then connect the VCR to the TV. Copyright protection in the VCR could distort the picture playing on the VCR/DVD.



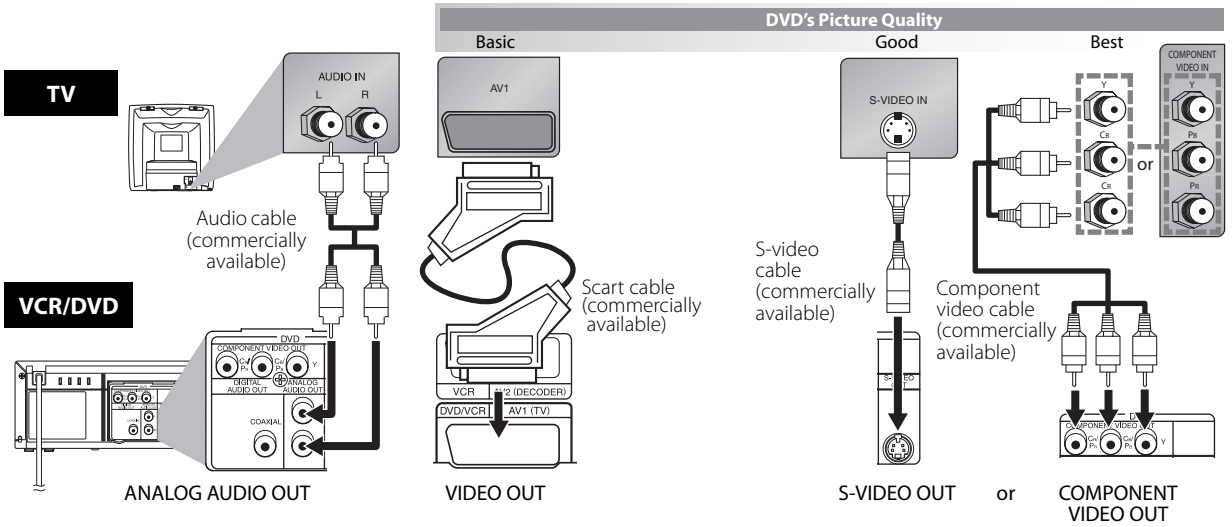
Hint

- Playback picture from DVD and VCR cannot be delivered through the Round Coaxial cable. The Round Coaxial cable is only for sending the antenna signal to the TV.
- Connect the VCR/DVD directly to the TV. If you attempt to view video on a TV connected via a VCR, the copy protection function will scramble the picture.

SETUP

VCR and Basic DVD Connection

Available on DVD only

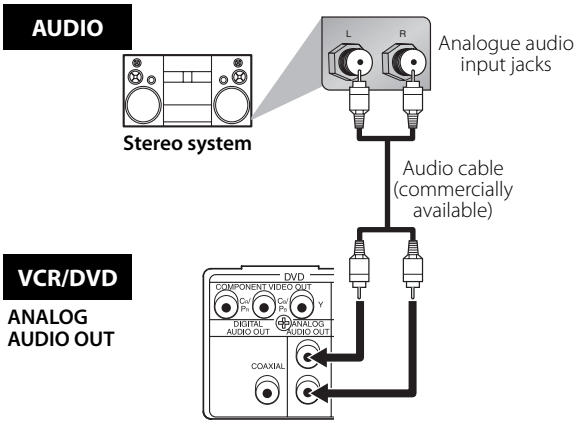


Hint

- The VCR/DVD is sending each video signals simultaneously. If you connected an S-VIDEO OUT and/or a COMPONENT VIDEO OUT with the VIDEO OUT (SCART), make sure your TV's input mode is set correctly according to the connection you made.
- You will not be able to hear all of the sound being output by the VCR/DVD if you use the audio cables (commercially available) to a monaural TV that has only one audio input jack.
- Be sure that the colours of the jacks and plugs match up when connecting the cable.
- If you want to listen to the audio through audio equipment, connect only the S-video or component video cable to the TV.
- The S-VIDEO OUT and COMPONENT VIDEO OUT jacks are only useful in DVD mode.
- If your TV is compatible with 525 or 625 progressive scanning and you want to enjoy that high quality picture, you must connect the component video cable to your TV's component video input jacks (Y/P_R/P_B) and select progressive scanning mode. To set the mode, set "VIDEO OUT" to "COMPONENT PROGRESSIVE (Component (P))" in the DISPLAY menu so that "P.SCAN" will appear on the display of this VCR/DVD. (The progressive scanning is not available in the VCR mode.) See pages 30, 31 for more details.
- If your TV is not compatible with progressive scanning, use this VCR/DVD in interlace mode. Make sure that no "P.SCAN" is on the display of this VCR/DVD. If so, set "VIDEO OUT" to "COMPONENT INTERLACE (Component (I))" in the DISPLAY menu so that "P.SCAN" on the display of this VCR/DVD will disappear.
- ANALOG AUDIO OUT jacks and scart terminal are not available on the DTS audio.

Playing 2 channel audio

Connecting the VCR/DVD to audio equipment provides normal stereo sound, plus powerful stereo sound enhanced by Dolby Digital 5.1 channel surround sound, DTS and MPEG audio.



Connection \ Setting	SETUP > (QUICK) >		
	DOLBY DIGITAL	DTS	MPEG
Connecting to Stereo System.	**DPCM**	**OFF**	**DPCM**

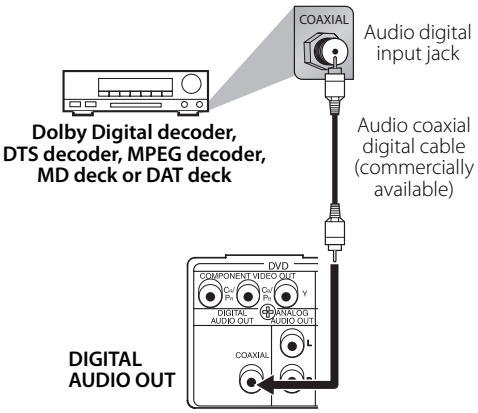
* To complete these settings, refer to pages 30, 32.

Hint

- Playing back a DVD using incorrect settings may generate noise distortion and may also damage the speakers.
- ANALOG AUDIO OUT jacks are not available on the DTS audio.

Playing Dolby Digital (5.1 channel audio), DTS or MPEG audio

Connecting an amplifier with a Dolby Digital/ DTS/ MPEG audio digital surround processor to your VCR/DVD's audio digital jack provides richer and more powerful audio play. This connection is not possible if the processor or amplifier to which you want to connect does not have an audio digital input jack.



Connection \ Setting	SETUP > (QUICK) >		
	DOLBY DIGITAL	DTS	MPEG
Connecting to a Dolby Digital, DTS decoder or MPEG decoder for Dolby Digital, DTS or MPEG audio output.	**BITSTREAM**		
Connecting to the other equipment (an MD deck or DAT deck etc.) without Dolby Digital decoder.	**DPCM**	**OFF**	**DPCM**

* To complete these settings, refer to pages 30, 32.

■ Digital Connection to Audio Equipment or MD deck without a Dolby Digital Decoder

- Audio CD

  Audio CDs can be transferred digitally to other equipment such as an MD deck or DAT deck, play the disc as you would normally with the connection shown above. Audio CDs recorded in the DTS format cannot be transferred digitally or via analogue.
- Some Audio CDs have a short silent section between musical tracks. When sound from discs such as these is digitally recorded by connecting the VCR/DVD directly to a digital recorder (such as an MD deck or DAT deck), the music may be recorded continuously and track numbers may be lost.
- DVD

  DVDs recorded in Dolby Digital 5.1 channel surround sound, DTS or MPEG Audio cannot be connected digitally to external recording equipment such as an MD deck or DAT deck.
  It may be possible to record "Dolby Digital" or "MPEG" Audio via a digital connection if the VCR/DVD output is set to "DPCM" (see page 32 "AUDIO Setting"). Analogue recording is possible but not for DTS recorded audio.

Hint

- The DVD AUDIO OUT and DIGITAL AUDIO OUT jacks are only useful in DVD mode.
- The audio source on a disc in a Dolby Digital 5.1 channel surround format cannot be recorded as digital sound by an MD or DAT deck.
- Playing back a DVD using incorrect settings may generate noise distortion and may also damage the speakers.
- By hooking this VCR/DVD up to a Multi-channel Dolby Digital decoder, you can enjoy high-quality Dolby Digital 5.1 channel surround sound as heard in the movie theatres.
- By hooking this VCR/DVD up to the DTS decoder, you can enjoy 5.1 channel surround system which reproduces the original sound as truthfully as possible. 5.1 channel surround system is developed by the Digital Theater System Inc.

PREPARATION FOR USE

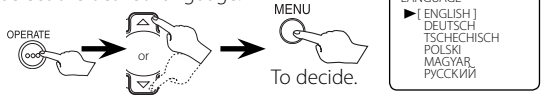
Turn on the VCR/DVD for the First Time

VHS press VCR first.

Refer to page 7 to switch between the VCR mode and the DVD mode.

1. Turn on the TV and select an appropriate external input mode on the TV until the VCR/DVD's picture appears.

2. Select the desired language.

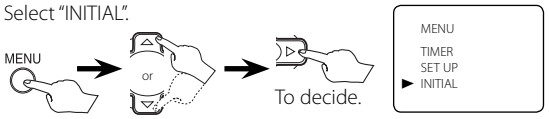


Automatic Channel Preset

VHS press VCR first.

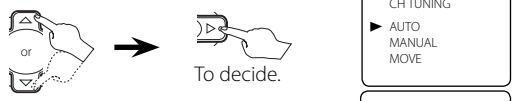
You can programme the tuner to scan all the channels you can receive in your area.

1. Select "INITIAL".

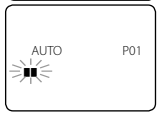


2. Select "CH TUNING".

3. Select "AUTO".



- The tuner scans and memorises all the active channels in your area.
- After scanning, the tuner stops on the lowest memorised channel.

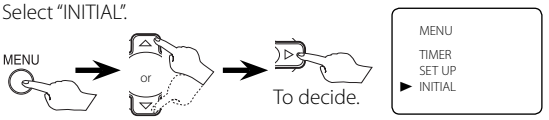


Clock Set Up

VHS press VCR first.

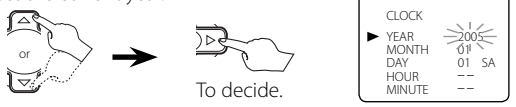
This VCR/DVD incorporates a 24-hour clock. The clock must be set for the Timer Recording function to operate correctly.

1. Select "INITIAL".

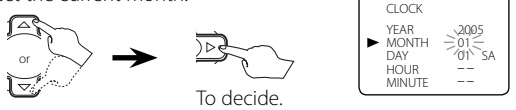


2. Select "CLOCK".

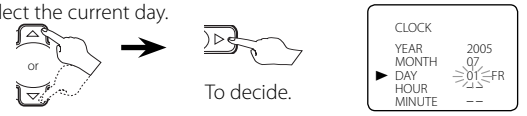
3. Select the current year.



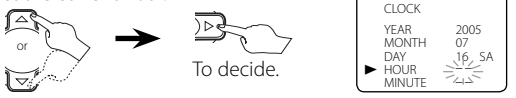
4. Select the current month.



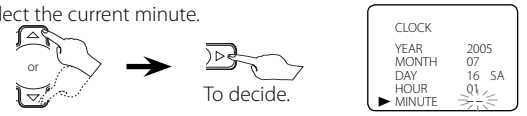
5. Select the current day.



6. Select the current hour.



7. Select the current minute.



8. To exit the CLOCK screen.

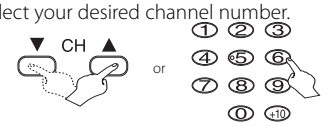
Hint
- To go back one step, press **Cursor ◄** (during the steps **3** to **7**).
- Although seconds are not displayed, they begin counting from 00 when you exit by pressing **MENU**. Use this feature to synchronise the clock with the correct time.
- Repeat these steps only if either there was a power failure or this VCR/DVD has been unplugged for more than 1 hour.

Select a Channel

VHS press VCR first.

You can select a desired channel by using **CH ▲ / ▼** or directly pressing **the Number buttons** on the remote control.

1. Select your desired channel number.



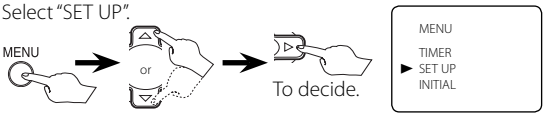
Hint
- Enter a channel numbers as a two-digit number for the quickest results. For example, to select channel 6, press **0** and **6**. If you only press **6**, channel 6 will be selected after a brief delay.
- You can only select channels 1–99.

Picture Select

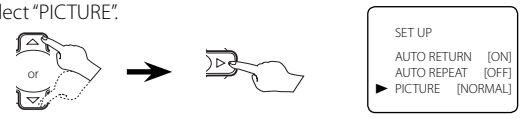
VHS press VCR first.

This function enables you to select the picture quality of a tape.

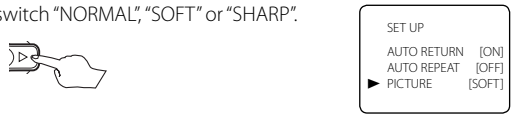
1. Select "SET UP".



2. Select "PICTURE".



3. To switch "NORMAL", "SOFT" or "SHARP".



4. To exit the PICTURE screen.

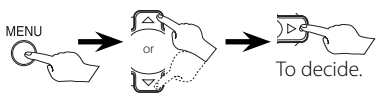
Hint
- Once you select the Picture Select mode, it stays in effect even after you turn off the VCR/DVD.

Manual Channel Preset

VHS press VCR first.

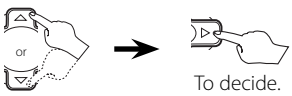
Each channel is tuned manually and individually. DO NOT use "Automatic Channel Preset" if you intend to use some of the pre-tuned channels.

1. Select "INITIAL".



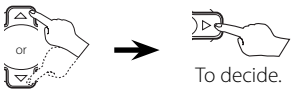
MENU
TIMER
SET UP
► INITIAL

2. Select "CH TUNING".



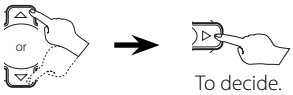
INITIAL
► CH TUNING
CLOCK
LANGUAGE

3. Select "MANUAL".



CH TUNING
AUTO
► MANUAL
MOVE

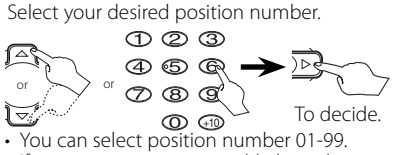
4. Select "POSITION".



MANUAL
► POSITON P01
CHANNEL 005
DECODER [OFF]
SKIP [ON]
VIDEO MODE [SECAM]

- When a weak signal is received in Manual Tuning mode, you can change the background to solid blue or the static screen by pressing **CLEAR/C-RESET**.

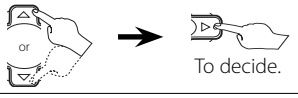
5. Select your desired position number.



MANUAL
► POSITON P05
CHANNEL 005
DECODER [OFF]
SKIP [ON]
VIDEO MODE [SECAM]

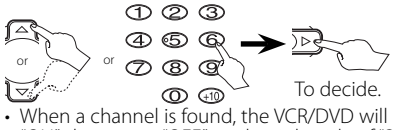
- You can select position number 01-99.
- If you want to remove scrambled signals, press **Cursor ▲ / ▼** repeatedly to point to "DECODER". Then, press **Cursor ►** to select "ON".

6. Select "CHANNEL".



MANUAL
POSITON P05
► CHANNEL 005
DECODER [OFF]
SKIP [ON]
VIDEO MODE [SECAM]

7. Select your desired channel number.



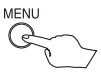
MANUAL
POSITON P05
► CHANNEL 005
DECODER [OFF]
SKIP [OFF]
VIDEO MODE [SECAM]

- When a channel is found, the VCR/DVD will stop searching and "ON" changes to "OFF" on the right side of "SKIP" automatically and the picture will appear on the TV screen.
- If "ON" appears on the right side of "SKIP", press **Cursor ►** to cancel the selecting position number then press **Cursor ▲ / ▼** to point "SKIP". Then press **Cursor ►** to select "OFF".
- You can select desired channel number by using **the Number buttons**. You must refer to the following Channel Plan table and press three digits to select the channel number. (To select channel 24, first press **0** and then press **2** and **4**.)

Channel Plan	
CH Indication	**TV Channel**
02 - 12	E2 - E12
21 - 69	E21 - E69
74 - 78	X, Y, Z, Z+1, Z+2
80 - 99, 100	S1 – S20, GAP
121 - 141	S21 - S41
142 - 153	R1 - R12

This VCR/DVD can receive Hyper and Oscar frequency bands.

8. To exit the Manual Channel Preset.



- To confirm that a channel has been added, press **CH ▲ / ▼**.

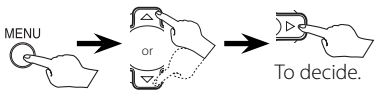
Hint
- Usually, this VCR/DVD distinguishes the colour system, which should be set according to the broadcasting. However, if there is no picture when you tried to recording of the TV programme, the VCR/DVD might have set the colour system wrongly. If so, change the "VIDEO MODE" according to the correct colour system in your area.

Skip a Preset Channel

VHS press VCR first.

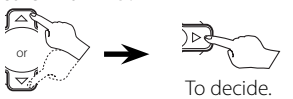
The channels you can no longer receive or seldom watch can be set to be skipped when you access channel with **CH ▲ / ▼**.

1. Select "INITIAL".



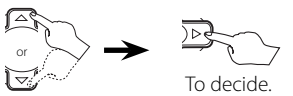
MENU
TIMER
SET UP
► INITIAL

2. Select "CH TUNING".



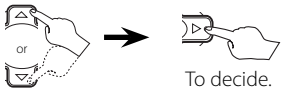
INITIAL
► CH TUNING
CLOCK
LANGUAGE

3. Select "MANUAL".



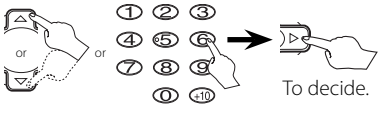
CH TUNING
AUTO
► MANUAL
MOVE

4. Select "POSITION".



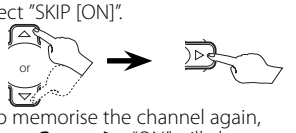
MANUAL
► POSITON P01
CHANNEL 005
DECODER [OFF]
SKIP [OFF]
VIDEO MODE [SECAM]

5. Select relevant position number.



MANUAL
► POSITON P05
CHANNEL 005
DECODER [OFF]
SKIP [OFF]
VIDEO MODE [SECAM]

6. Select "SKIP [ON]".



MANUAL
POSITON P01
CHANNEL 005
DECODER [OFF]
► SKIP [ON]
VIDEO MODE [SECAM]

- To memorise the channel again, press **Cursor ►**. "ON" will change to "OFF".

7. To exit the Manual screen.

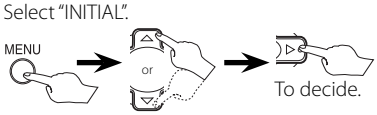
Hint
- To confirm that a channel has been deleted, press **CH ▲ / ▼**.

Channel Reprogramming

VHS press VCR first.

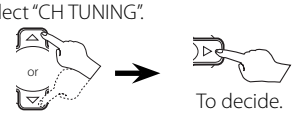
You can replace two channels.

1. Select "INITIAL".



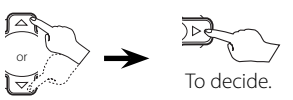
MENU
TIMER
SET UP
► INITIAL

2. Select "CH TUNING".



INITIAL
► CH TUNING
CLOCK
LANGUAGE

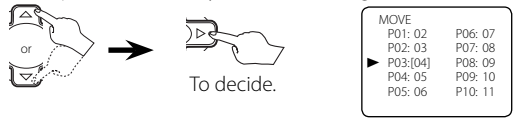
3. Select "MOVE".



CH TUNING
AUTO
MANUAL
► MOVE

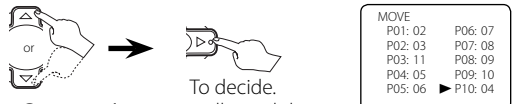
SETUP

4. Select the position number you want to change the channel.



- You cannot select a positon number where "---" appears next to the number. This is because "SKIP" is set to "ON" for this position number.
- When a weak signal is received in Channel Reprogramming mode, you can change the background to static blue by pressing **CLEAR/C-RESET**. If you press the button again, the background will return to the static screen.

5.

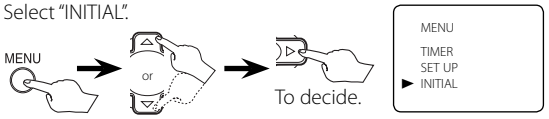


Press **Cursor ▲ / ▼** repeatedly until the channel move to another position number.

6. To exit the Channel Reprogramming.

Change the On-Screen Language

1. Select "INITIAL".



2. Select "LANGUAGE".

3. Select the desired language.

VCR FUNCTIONS

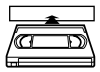
PLAYBACK

Before:
Turn on the TV and select an appropriate external input mode on the TV until the VCR/DVD's picture appears.

Refer to page 7 to switch between the VCR mode and the DVD mode.

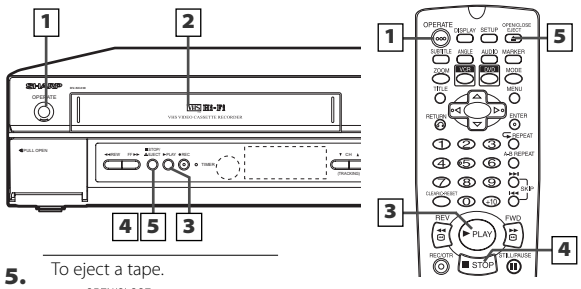
1.

2.



3.

4. To stop playback.



5. To eject a tape.

Hint

- When a tape without erase-protection tab is inserted, the VCR/DVD will start playback automatically.
- Tracking adjustment will be activated automatically (Digital Tracking function) when you start playback.
- When playing pre-recorded tapes or tapes recorded on units other than your own, noise lines (black and white streaks) may appear on the playback picture. If this occurs, you can adjust the tracking control manually by pressing **CH ▲ / ▼** until the streaks disappear. To return to the DTR function, stop the tape once and start playback again.

<If a tape is already in the VCR/DVD...>

- Using the buttons on the VCR/DVD
  Just press **PLAY ▶** on the VCR/DVD. Power will automatically turn on and playback will start (Direct Button Operation).
- Using the buttons on the remote control
  Press **OPERATE** to turn on, and then press **PLAY ▶**.

Playback System Change

When you select "AUTO" by pressing **TAPE SPEED/SYSTEM**, this unit will distinguish the system (MESECAM or PAL) automatically according to the format of recorded tape during playback.

If the picture on the TV screen is black and white, select the system "MESECAM" or "PAL" manually by using **TAPE SPEED/SYSTEM**. Each time you press **TAPE SPEED/SYSTEM**, TV screen will change "AUTO", "MESECAM" or "PAL".

OTHER OPERATIONS

To Cue or Review Picture during Playback (Speed Search)

Press **FWD ▶▶** or **REV ◀◀**.

- Press it again and the VCR/DVD will search in super high speed.
- Super high speed is not available for an NTSC tape.
- The sound will be muted during Speed Search.

To Freeze the Picture on TV Screen during Playback (Still Picture)

Press **STILL/PAUSE ❚❚**. Each time you press the button, the picture will be forwarded by one frame.

- If the picture begins to vibrate vertically during the still mode, stabilise the picture by pressing **CH ▲ / ▼**.
- If the picture is distorted or rolling vertically, adjust the vertical hold control on your TV, if equipped.

Hint for "Speed Search" and "Still Picture"

- Usually there will be video "noise" lines (black and white streaks or dots) on the screen. This is normal. The still picture will, in addition to containing the "noise" lines, be black and white. This is not a fault of the machine but merely a by-product of the technology involved in producing a VCR with LP mode.

Counter Reset

Press **CLEAR/C-RESET**.

To Play Back in Slow Motion

Press **SLOW ▸** during playback or the still mode.

- You can control the speed by pressing **FWD ▶▶**(faster) or **REV ◀◀**(slower). Press **PLAY ▶** to return to normal playback.
- If the noise bars appear on the TV screen, you can reduce it by pressing **CH ▲ / ▼**.

Auto Rewind

When a tape reaches its end during playback, fast forward, or recording (except Timer Recording and One Touch Recording), the tape will automatically rewind to the beginning. After rewinding finishes, the VCR/DVD will eject the tape.

Hint

- Still/Slow/Pause mode will be automatically cancelled after 5 minutes to prevent damage to the tape and the video head.
- To return to playback from the Speed Search/Still/Slow mode, press **PLAY ▶**.

Time Search

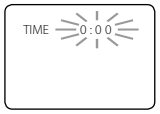
press VCR first.

You can specify the time for fast forwarding or rewinding.
If a tape includes both programmes recorded in the PAL (or MESECAM) system and ones recorded in the NTSC system, this function may not be operated correctly.

- Insert a tape into this VCR/DVD.

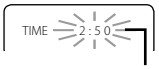
1.

x2 (Twice)



2. Select the desired length of time for fast forwarding or rewinding.

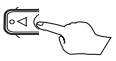
Within 30 seconds.



0:01 ~ 9:59
(1 minute~9 hours and 59 minutes)

3.

To rewind.



To fast forward.

Within 30 seconds.

After searching ...

4.

►

- When 0:00 is reached, the VCR/DVD will start playback automatically.

Hint
- Time Search can be set up to 9 hours 59 minutes (9:59).
- This function is not available during recording.
- If the end of the tape is reached during a search, this VCR/DVD will cancel the search and rewind the tape.
- To exit the Time Search mode, press **MENU** in step **2**, or press **STOP** ■ after step **3**.

Index Search

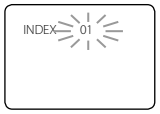
press VCR first.

You can specify the number of programmes to be skipped.

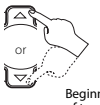
- The index mark will be made automatically when **REC/OTR** is pressed. It will also be marked at the starting point of Timer Recording and OTR.
- The index mark is not recorded if **STILL/PAUSE** ❚❚ is pressed and released during recording.
- The time gap between index marks on the tape should be greater than 1 minute for SP recording and 2 minutes for LP recording.
- Insert a tape into this VCR/DVD.

1.

x1 (Once)

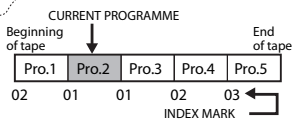


2.



Within 30 seconds.

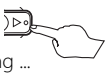
01 ~ 20



3.

To rewind.

To fast forward.



Within 30 seconds.

After searching ...

4.

►

- When the preset programme is reached, the VCR/DVD will start playback automatically.

Hint
- Index Search can be set up to 20.
- This function is not available during recording.
- If the end of the tape is reached during a search, this VCR/DVD will cancel the search and rewind the tape.
- This VCR/DVD stores index mark at the beginning of the recording. There should be time gap between 2 index marks for the Index Search.
- To exit the Index Search mode, press **MENU** in step **2**, or press **STOP** ■ after step **3**.

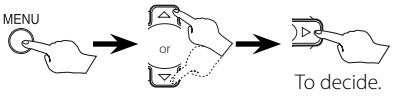
Auto Repeat

press VCR first.

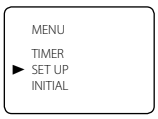
You can repeat playback of a whole tape automatically.

- Insert a tape into this VCR/DVD.

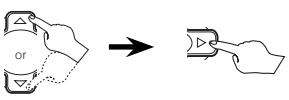
1. Select "SET UP".

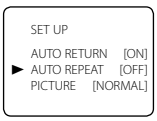


To decide.

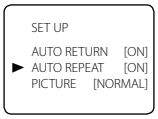


2. Select "AUTO REPEAT".





3.



4.

AUTO REPEAT ►

5. To stop playback.

Hint
- To cancel Auto Repeat, follow steps **1** to **3**. Then, press **Cursor** ►, so that "OFF" appears beside "AUTO REPEAT". Press **MENU** to exit.
- If menu remains on the TV screen at step **3**, press **MENU** to exit.
- Once you select "AUTO REPEAT", it stays in effect even after you turn off the VCR/DVD.

Quick-Find

VHS press VCR first.

This function enables you to search and confirm the contents of the recorded programme(s) using the index mark.

- The tape must be fully rewound.

To skip to the beginning of next programme

1. DIRECT SKIP QUICK-FIND

To view at normal speed

1. ▶ PLAY The Quick-Find is cancelled.

Hint

- This function will not operate in the Recording mode.
- When you want to cancel the Quick-Find while in progress, press **STOP** ■.
- When the end of a tape is reached during the Quick-Find, the tape will automatically rewind to the beginning. After rewinding finishes, the VCR/DVD will eject the tape.

Auto Return

VHS press VCR first.

When all timer recording is finished, the VCR/DVD will automatically rewind the tape to the beginning where it started recording.

If there are any remaining programmes including Daily, Everyday and Weekly, Auto Return will not operate.

1. Select "SET UP".

MENU → or → To decide.

MENU
TIMER
▶ SET UP
INITIAL

2. Select "AUTO RETURN".

or →

SET UP
▶ AUTO RETURN [OFF]
AUTO REPEAT [OFF]
PICTURE [NORMAL]

3.

SET UP
▶ AUTO RETURN [ON]
AUTO REPEAT [OFF]
PICTURE [NORMAL]

4. To exit the Auto Return.

MENU

To watch the Recorded Timer Programme

Press **TIMER ON/OFF** to cancel the timer standby. Then, select VCR mode by pressing **VCR** on the remote control. Press **PLAY** ▶.

RECORDING

Recording & OTR (One Touch Recording)

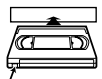
This function enables you to set the duration of a recording simply by pressing **REC/OTR**.

Before: Turn on the TV and select an appropriate external input mode on the TV until the VCR/DVD's picture appears.

VHS press VCR first.

Refer to page 7 to switch between the VCR mode and the DVD mode.

1. Insert a tape.



with erase-protection tab

- If necessary, rewind or fast forward the tape to the point at which you want to begin recording.

2. Select the desired channel.

▼ CH ▲ or ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ 0 +10

P12

TV Screen

3. Select the desired tape speed.

TAPE SPEED /SYSTEM

SP

Tape Type	Recording / Playback Time	
Tape Speed	SP Mode	LP Mode
E-60	1 hour	2 hours
E-120	2 hours	4 hours
E-180	3 hours	6 hours
E-240	4 hours	8 hours

4. REC/OTR

You can select a fixed recording time by pressing **REC/OTR** repeatedly.

REC (Normal recording) → ● (0:30) → ● (1:00)..... → ● (7:30) → ● (8:00)

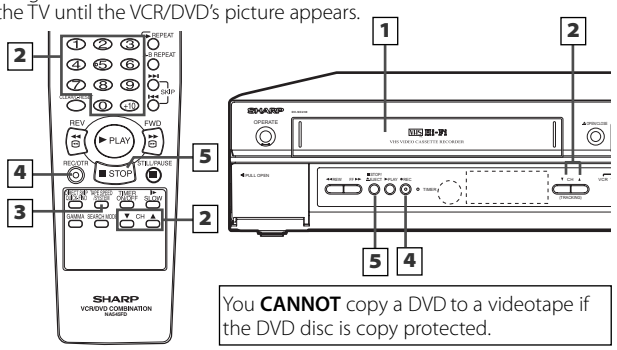
● SP

- Recording stops when 0:00 is reached.
- To check remaining time during an OTR, press **DISPLAY**.
- To change the recording length during an OTR, press **REC/OTR** repeatedly until the desired length appears.
- To cancel the OTR but continue recording, press **REC/OTR** repeatedly ● appears without the recording length.

5. To stop recording or before the end time of OTR, press **STOP** ■.

■ STOP

■



You **CANNOT** copy a DVD to a videotape if the DVD disc is copy protected.

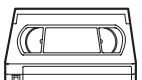
Assemble Function

You can record in continuation from previous programme on a pre-recorded tape.

1. Insert a pre-recorded tape. Press **PLAY** ▶ to start playback.
2. Press **STILL/PAUSE** ❚❚ at the desired point on the tape.
3. Press **REC/OTR**. The VCR/DVD will be the Recording Pause mode.
4. Press **CH** ▲ / ▼ to select the channel to be recorded.
5. Press **REC/OTR** or **STILL/PAUSE** ❚❚. The recording will begin.
6. Press **STOP** ■ when recording is completed.

Accidental erasure prevention

To prevent accidental recording on a recorded cassette, remove its erase-protection tab. To record on it later, cover the hole with plastic tape.



erase-protection tab

To stop recording temporarily (Pause mode)

Press **STILL/PAUSE** ❚❚.

- During the Recording Pause mode, 5 ▮ marks appear on the TV screen. Each ▮ mark represents 1 minute. After 5 minutes, the VCR will automatically switch to the stop mode to prevent tape damage.
- Press it again to resume recording.

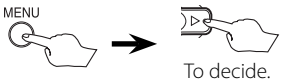
Timer Recording

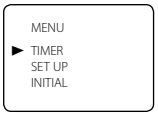
VHS press VCR first.

You may programme the VCR/DVD to start and end a recording while you are away. You can set 8 programmes to record on specific days, daily or weekly within a 1-year period.

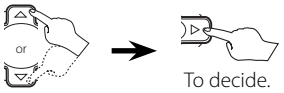
- Insert a tape with its erase-protection tab in place. (If necessary, rewind or fast forward the tape to the point at which you want to begin recording.)

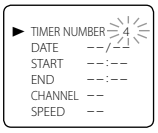
1. Select "TIMER".





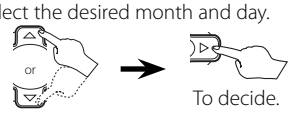
2. Select an empty programme number.

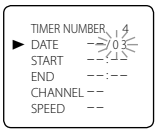




- If **Cursor** ◄ is pressed when the TIMER NUMBER is flashing, the entire programme contents will be erased.

3. Select the desired month and day.

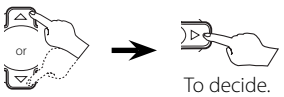


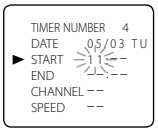


- You can programme one year in advance.
- You can also select the recording routine option by pressing **Cursor** ▲ / ▼ when the month digit is flashing. Those programmes can only set a recording according to the same channel at the same time.

- For daily recording :	Select "MO-FR" to recording from Monday through Friday.
- For everyday recording :	Select "MO-SU" to recording everyday.
- For weekly recording :	Select "W-MO" to recording every week. (e.g. W-MO : every Monday)

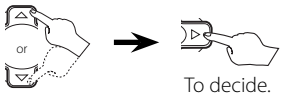
4. Select the desired start time (hour & minute).

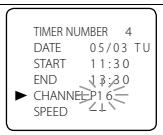




5. Repeat the procedure in step **4** to set the end time.

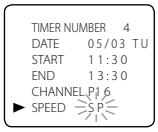
6. Select the desired channel.



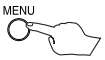


7. Select the desired recording speed.

- To set another programme after step **7**, press **Cursor** ►. Then, continue with step **2**.



8. To exit.



9.

TIMER indicator lights up on the front panel. (When you turn off the VCR/DVD, " ◷ " will appear in the front panel display.) The VCR/DVD will change to the DVD mode. Turn off the VCR/DVD when you do not use the DVD functions. In some occasions, however, the VCR/DVD may be automatically turned off, instead of changing to the DVD mode after pressing **TIMER ON/OFF**.

Hint

- If you have not set the clock yet, CLOCK setting menu appears. If so, follow the steps outlined in the "Clock Set Up" on page 12. Then, set the timer.
- If you do not press **Cursor** ► within 5 seconds of setting an item, the input mode will move to the next step.
- Press **Cursor** ◄ to go back one step from the current setting during steps **3** to **7**.

To Check, Correct, or Cancel a Timer Programme

1. Press **TIMER ON/OFF** then, **VCR** on the remote control.
2. Press **MENU**, then **Cursor** ►.
3. Press **Cursor** ▲ / ▼ to select the programme number which you want to check. The details of the programme will appear on the TV screen.
   - Press **Cursor** ◄ / ► to go to the digit you want to change. Then, enter correct numbers by pressing **Cursor** ▲ / ▼.
   - You may cancel the entire programme by pressing **Cursor** ◄ while the programme number flashes.
4. Press **MENU** to exit.
5. Press **TIMER ON/OFF** to return to the timer standby mode.

To Cancel a Timer Recording in Progress

Press **STOP** ■**/EJECT** ⏏ on the VCR/DVD.

Hint

- **STOP** ■ on the remote control will not function in the Timer Recording mode.

Hints for OTR and Timer Recording

Before you set OTR or Timer Recording

- If a tape is not in the VCR/DVD or does not have the erase-protection tab, the TIMER indicator on the front panel and " ◷ " flash and Timer Recording cannot be performed. Please insert a recordable tape.
- Press **VCR** on the remote control before you set Timer Recording. Make sure the remote control is in the VCR mode, then press **TIMER ON/OFF**.

After an OTR and a Timer Recording has been set, this VCR/DVD operates as follows:

- When Timer Recordings are set, the TIMER indicator on the front panel and " ◷ " will appear. To use the VCR as usual until the time for the recording, press **TIMER ON/OFF** so that the TIMER indicator on the front panel and " ◷ " disappear. Select either VCR or DVD mode, then continue with the other features as described in this manual.
- " ◷ " will not appear in the DVD mode. However, the Timer Recordings will remain as programmed.
- Once the VCR/DVD turns to the timer standby mode, no VCR functions are available until **TIMER ON/OFF** is pressed. (**OUTPUT** on the front panel and **VCR** on the remote control will not function.)
- To cancel the timer standby mode, press **TIMER ON/OFF** on the remote control or **STOP** ■**/EJECT** ⏏ on the VCR/DVD, then press **VCR** to activate the VCR function again.
- The mode of the VCR/DVD and the remote control may differ (VCR mode or DVD mode) when you set Timer Recording or after you cancelled Timer Recording. Press **VCR** or **DVD** on the remote control to select your desired mode before you operate.

While OTR or Timer Recording is performing.

- If a tape runs out before an OTR or a Timer Recording is finished, the VCR/DVD ejects the tape and switches to the DVD mode automatically. Press **TIMER ON/OFF** on the remote control or **STOP** ■**/EJECT** ⏏ on the VCR/DVD, then press **VCR** to activate the VCR function again.
- If you want to use the VCR/DVD during a Timer Recording or while " ◷ " is on or flashing, Press **OPERATE** to turn on the VCR/DVD. Press **DVD** on the remote control to choose DVD mode, then continue with the other DVD features as described in this manual. You don't need to set the TIMER off to use the DVD.

When an OTR or a Timer Recording is completed...

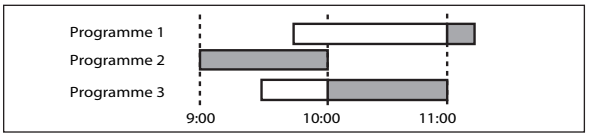
- If the other Timer Recordings remain as programmed, the VCR/DVD switches to the DVD mode automatically, and the TIMER indicator on the front panel lights up to indicate the VCR/DVD is in the timer standby mode. In some occasions, however, the VCR/DVD may be automatically turned off, instead of changing to the DVD mode after pressing **TIMER ON/OFF**.
- The TIMER indicator on the front panel flashes if there are no more Timer Recordings on standby. If you want to use the VCR function, press **TIMER ON/OFF** on the remote control or **STOP ■/EJECT ⏏** on the VCR/DVD. Then press **VCR** to activate the VCR function.
- Once the VCR/DVD switches to the DVD mode, all the VCR function will be unavailable. " ◷ " will not appear as long as the DVD is in use. All the DVD functions are available during OTR, timer standby mode and Timer Recording.
- When you use the VCR/DVD in DVD mode during an OTR or a Timer Recording, the VCR/DVD will not turn off automatically even if the end time of the OTR or Timer Recording has been past.

Note (for Timer Recording) :

- If there is a power failure or the VCR/DVD is unplugged for more than 1 hour, clock and all timer settings will be lost.

To avoid overlap of Timer Programming ...

- A timer programme will not work while another programme is under execution.



Direct Dubbing

VHS press VCR first.

Refer to page 7 to switch between the VCR mode and the DVD mode.
This will be possible only if the DVD is not copy protected.

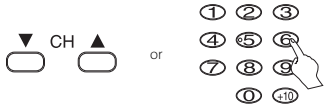
1. Insert a tape.

with erase-protection tab

- If necessary, rewind or fast forward the tape to the point at which you want to begin recording.

2. Insert a disc with label facing up.

3. Press **0**, **0**, **4** to select DISC.



4. Select the desired tape speed.

Tape Type	Recording / Playback Time	
Tape Speed	SP Mode	LP Mode
E-60	1 hour	2 hours
E-120	2 hours	4 hours
E-180	3 hours	6 hours
E-240	4 hours	8 hours

5. REC/OTR — Recording starts.

6. DVD → PLAY — Playback starts.

7. To Stop Recording. VCR → ■ STOP

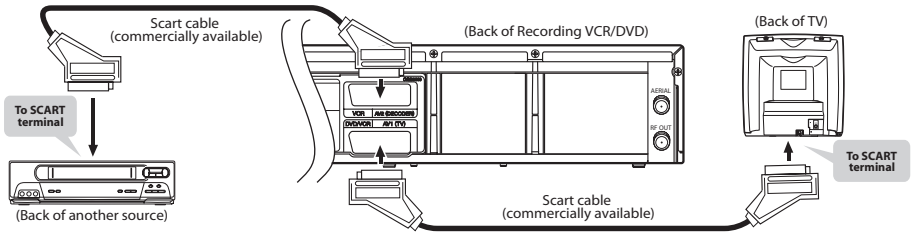
To Stop Playback. DVD → ■ STOP

Hint

- Press **STILL/PAUSE ❚❚** at the point where you want to start recording when you do dubbing middle of the DVD.
- To stop recording temporarily, press **STILL/PAUSE ❚❚** after press **VCR**. Press **STILL/PAUSE ❚❚** again to resume recording.

Copying a Video Tape

Warning: Unauthorised recordings of copyrighted video tapes may be an infringement of copyright laws.
Connect the recording VCR/DVD(this unit), playing VCR(another VCR) and your TV as outline in the following diagram.



1. Insert a pre-recorded tape into the playing VCR.
2. Insert a tape with its erase-protection tab into the recording VCR/DVD.
3. Press **TAPE SPEED/SYSTEM** on the remote control of the recording VCR/DVD to select the desired recording speed (SP/LP).
4. Select the "AV2" or "AV3" position on the recording VCR/DVD.
   - To use the input jack on the back of this VCR/DVD, select "AV2" position by pressing **0, 0, 2** on the remote control or **CH ▲ / ▼**.
   - To use the input jacks on the front of this VCR/DVD, select "AV3" position by pressing **0, 0, 3** on the remote control or **CH ▲ / ▼**.
5. Press **REC** on the recording VCR/DVD.
6. Begin playback of the tape in another source.
7. To stop recording, press **STOP ■/EJECT ⏏** on the VCR/DVD for the recording VCR/DVD, then stop playback of the tape in another source.

Hint

- For best results during dubbing, use the front panel controls whenever possible. The remote control might affect another source's operation.
- If video or colour fades in and out, you may be copying a copy guarded video tape.
- Unauthorised recording of copyrighted materials may infringe on the rights of copyright owners, violate copyright laws and may not record clearly.
- "AV2" and "AV3" are found before the lowest memorised channel. (Example: P02)
- "AV3" input jacks are on the front of this VCR/DVD.

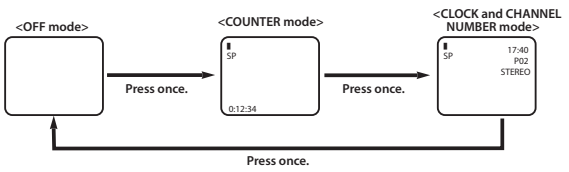
Status Display

VHS press VCR first.

You can check the Counter or Clock & Channel number.

1. DISPLAY

Each time you press **DISPLAY**, TV screen will change as illustrated:
When you select the channel using the remote control **the Number buttons**, select the desired channel (position number).



Hi-Fi Stereo Sound System

VHS press VCR first.

This VCR/DVD will record and playback Hi-Fi stereo sound. In addition it has an A2 and NICAM stereo sound decoder.

This VCR/DVD will receive stereo and bilingual broadcasts and there are several ways of recording and playing back the sound.

1. AUDIO

Each mode is indicated on the TV screen as following.

- During playback of the recorded tape in Hi-Fi mode
- During reception of stereo broadcasts

Mode	Audio output	Display on the TV screen
Stereo	Stereo	STEREO
L	L audio from the both speakers	LEFT
R	R audio from the both speakers	RIGHT
Normal	Monaural	- None -

- During reception of bilingual broadcasts

Mode	Audio output	Display on the TV screen
Main	Main audio from the both speakers	MAIN
Sub	Sub audio from the both speakers	SUB
Main/Sub	• Main audio from the left speakers • Sub audio from the both speakers	MAIN + SUB

Hint
- If you play non-Hi-Fi tapes, the VCR/DVD will play automatically in monaural even if you select any mode.
- If the stereo signal becomes weak, the broadcast is automatically recorded in monaural.

Video Casette Tape

The VCR/DVD will operate with any casette that bears the VHS mark. For best results, we recommend the use of high-quality tapes. Do not use poor quality or damaged tapes.

- You can prevent accidental erasing of a recording by breaking off the erase-protection tab on the back edge of the casette.
- If you decide to record on the tape again, cover the hole with plastic tape.

TV Colour System

Different countries use different television colour systems. Tapes recorded in the PAL, MESECAM or NTSC system can be played back on this VCR/DVD. Usually, the picture on the TV screen will be in black and white when you play back a tape that is recorded in a different colour system.

Tapes recorded in the NTSC system can be played back on this VCR/DVD and a PAL system TV set. This feature is only available in the SP mode. When playing back such tapes, the picture may roll up or down, shrink vertically and black bars may appear both at the top and bottom of the screen. Adjust the vertical hold control on your TV, if the TV features this control.

Hint
- When playing an NTSC tape playback picture may become blurred or picture noise may appear during speed search, slow motion or still mode. This is not a malfunction.

Automatic Operation

Automatic Rewind, Eject, Off

When the end of a tape is reached during recording, playback or fast forward, the tape will automatically rewind to the beginning. After that, the VCR/DVD will eject the tape.

- The tape will not auto-rewind during Timer Recording or One Touch Recording.

Tape Eject

A tape can be ejected with the VCR/DVD power on or off (but the VCR/DVD must be plugged in).

- If a Timer Recording is set, press **STOP ■/EJECT ⏏** twice to eject a tape.

Real Time Tape Counter

- This shows the elapsed recording or playback time in hours, minutes and seconds on screen.
  (Nothing is shown in the case of blank portion.)
- The " – " indication will appear when the tape is rewound further than the tape counter position "0:00:00".
- To reset tape counter, press **CLEAR/C-RESET**.

DVD FUNCTIONS

PLAYBACK

Before: Turn on the TV, amplifier and any other equipments which are connected to this VCR/DVD. Make sure the TV and audio receiver (commercially available) are set to the correct channel.

When you play NTSC recorded discs, the default setting converts this to a modified PAL. (See "DISPLAY Setting" on page 31.)

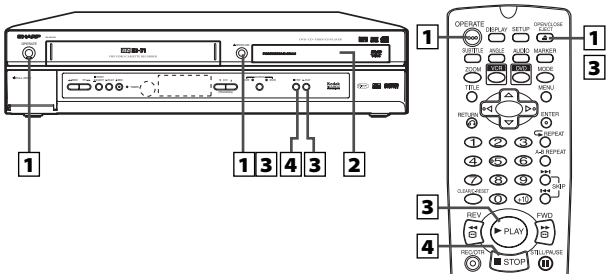
DVD DVD-RW VR MODE DivX CD VCD

(MP3 JPEG page 22) press DVD first.

Refer to page 7 to switch between the VCR mode and the DVD mode.

Hint

You can change the On-Screen language in "PLAYER MENU" setting. (Refer to pages 30, 31.)



1. OPERATE → OPEN/CLOSE EJECT

2. Insert a disc with label facing up.

3. OPEN/CLOSE EJECT → ▶ PLAY

4. To stop playback.

■ STOP

Hint

- When you play MP3 or JPEG files, details are on page 22.
- A "prohibited icon" may appear at the top-right on the TV screen when the operation is prohibited by the disc or this VCR/DVD.
- Some DVDs may start playback from title 2 or 3 due to specific programmes.
- During the playback of a 2-layered disc, pictures may stop for a moment. This happens while the 1st layer is being switched to the 2nd layer. This is not a malfunction.
- A DVD-RW disc recorded in the VR mode may freeze momentarily during playback depending on how the playlist was made and edited (deleted titles, repeated recording).

DISC Menu

Some discs contain menus which allow you to customise disc playback.

Use **Cursor** ▲ / ▼ / ◀ / ▶ or **the Number buttons** to select an item, then press **ENTER** or **PLAY** ▶.

Calling up a Menu Screen (for playback of a DVD Video)

- Press **MENU** to call up the DVD menu.
- Press **TITLE** to call up the title menu.

Cancelling the PBC (for playback of a Video CD)

1. Insert a Video CD. (Playback will start automatically.)
2. Press **STOP** ■.
3. Enter track number of your choice with **the Number buttons**.
4. PBC is now cancelled and the playback of the Video CD will start.

Hint

- If the feature is not available, ⊘ symbol may appear on the TV screen.
- Menu operations may vary depending on the disc. Refer to the manual accompanying the disc for more details.

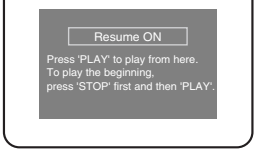
Resume

DVD DVD-RW VR MODE DivX CD VCD WITHOUT PBC MP3 JPEG

press DVD first.

Press **STOP** ■ during playback. Resume message will appear on the TV screen.

Press **PLAY** ▶, playback will resume from the point at which playback was stopped.



<Example : DVD>

Hint

- To cancel resume, press **STOP** ■ one more time during the stop mode. On some discs, **STOP** ■ will not work while the Resume message appears. Please wait until the message disappears.
- For MP3 and JPEG, playback will resume from the beginning of the track at which playback was stopped.
- The resume information will be kept even when the power is turned off.
- For some DivX® files, Resume may not function.

Paused and Step-by-Step Playback

DVD DVD-RW VR MODE DivX CD VCD MP3 JPEG

press DVD first.

Press **STILL/PAUSE** ❚❚ during playback.

- Playback will be paused and sound will be muted.
- Press **STILL/PAUSE** ❚❚ once during Dual/Folder Playback to pause a JPEG file only. Press **STILL/PAUSE** ❚❚ one more time to pause an MP3 track.

To continue playback, press **PLAY** ▶.

DVD DVD-RW VR MODE DivX VCD press DVD first.

The disc goes forward by one frame each time **STILL/PAUSE** ❚❚ is pressed during the pause mode.

To continue playback, press **PLAY** ▶.

Hint

- On DVDs, set "STILL MODE" to "FIELD" in the DISPLAY menu if pictures in the pause mode are blurred. (Refer to pages 30, 31.)

Fast Forward/Reverse Search

DVD DVD-RW VR MODE DivX CD VCD MP3

press DVD first.

Press **FWD** ▶▶ or **REV** ◀◀ repeatedly during playback to select the required forward or reverse speed.

To continue playback, press **PLAY** ▶.

Hint

- On DVDs, set "STILL MODE" to "FIELD" in the DISPLAY menu if pictures during Fast Forward and Reverse Search are blurred.
- For DVDs, Fast Forward or Reverse Search speed is different depending on the disc.
- For DVDs, approximate speed is 1(x2), 2(x8), 3(x20), 4(x50) and 5(x100).
- For DivX®, Audio CDs, Video CDs and MP3, approximate speed is 1(x2), 2(x8) and 3(x30).
- Picture quality of DivX® files in Fast Reverse is lower than that in Fast Forward.
- For Audio CDs and MP3, sound will be output during Fast Forward or Reverse Search.
- For some DivX® files, Fast Forward/Reverse Search may not function.

DVD Functions

Slow Forward/Slow Reverse

press first.

Press **FWD ►►** or **REV ◄◄** repeatedly during the pause mode to select the required forward or reverse speed.

To continue playback, press **PLAY ►**.

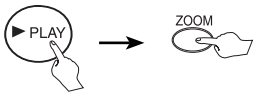
Hint
- Slow Forward or Reverse speed is different depending on the disc. Approximate speed is 1(1/16), 2(1/8) and 3(1/2).
- On DVDs, set "STILL MODE" to "FIELD" in the DISPLAY menu if pictures in the slow playback mode are blurred. (Refer to pages 30, 31.)
- You cannot play discs with DivX® files and Video CDs in reverse slow motion.

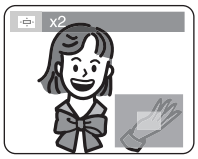
Zoom

press first.

The zoom function allows you to enlarge the video image and to pan through the enlarged image.

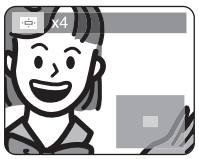
1. During playback, press **ZOOM**.



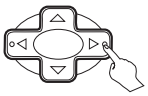


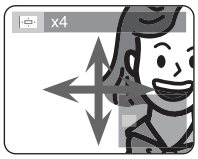
- The picture becomes twice as large.

2. Press **ZOOM** repeatedly to change the zoom factor: "x2", "x4" or "OFF".



3. Once a desired zoom factor is set, use **Cursor ▲ / ▼ / ◄ / ►** to slide the zoomed picture across the screen.





4. To exit zoom function, press **ZOOM** repeatedly to select "OFF".

Hint
- Zooming function does not work while the disc menu is showing up.
- x4 zoom is not available on some discs.
- Only x2 zoom is available on DivX®, Video CDs and JPEG.
- You may not be able to move zoomed JPEG pictures.
- Zooming function is also available during pause mode.

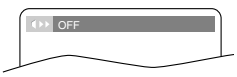
Rapid Play

press first.

Rapid Play function is available only during playback.

Available only on discs recorded in the Dolby Digital format, Rapid Play plays back in slightly faster/slower speed with sound that is close to normal playback quality.

1. During playback, press **MODE**.



- The current setting appears.

2. Press **ENTER** to switch among "♪♪ (x1.3)", "♪ (x0.8)" and "OFF".

♪ : Plays back approximately at 0.8 times of normal playback.
♪♪ : Plays back approximately at 1.3 times of normal playback.
OFF : No effects.

3. To continue normal playback, press **PLAY ►**.

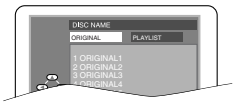
Hint
- Audio (language) setting cannot be changed while using this mode.
- Virtual Surround and Digital Gamma settings cannot be changed while using this mode.
- Virtual Surround does not function while using this mode.
- This feature may not work at some point in a disc.
- When using digital audio connection, the DPCM sound will be output.

Playing the Disc Recorded in VR Mode (Video Recording Format)

press first.

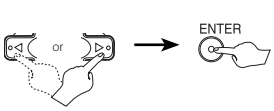
DVDs recorded in VR mode can have a PLAYLIST assigned to alter the order or content to be played. If a PLAYLIST has been created, you can choose the ORIGINAL or PLAYLIST option.

1. Press **MENU** in stop mode.



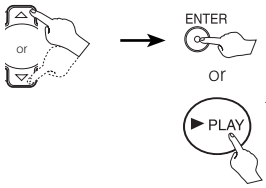
- The current setting screen will appear.
- Pressing **MENU** during playback is not valid.

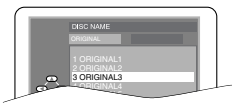
2.



ORIGINAL : A list of titles which are recorded with a DVD recorder.
PLAYLIST : A list of titles which is made based on the ORIGINAL edited list.

3. To select the desired title.





To decide.

Hint
- PLAYLIST will not be displayed when it has not been made.
- Resume playback will not be possible if you change the setting.
- When discs recorded in VR mode, changing the audio (MAIN, SUB or MAIN+SUB) is effective only when using an analogue connection. Although you may be able to change the settings of the on-screen display, it will not affect the sound when using a digital connection.

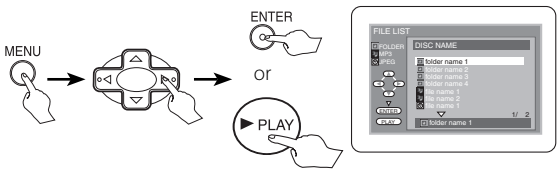
MP3, JPEG Playback

MP3 or JPEG is a method of compressing files. You can copy MP3 or JPEG files on CD-RW/-Rs from the computer and play back the files on this VCR/DVD.

MP3 JPEG press DVD first.

Insert a MP3 or JPEG-format disc, then press **MENU** to call up the FILE LIST on the TV screen.

1.



When selecting the folder:

- Press **Cursor ▶** when you want to go to the next hierarchy.
- Press **Cursor ◀** when you want to go back to the previous hierarchy (except for the top hierarchy).

2.

Refer to "Resume" on page 20.

This VCR/DVD recommends the files recorded under the following circumstances:

Applicable MP3 file	Remarks
Sampling frequency: 44.1 kHz or 48 kHz	• For MP3 file recorded in Variable Bit Rate (VBR), the VCR/DVD may not display the actual elapsed time.
Constant bit rate: 32 kbps ~ 320 kbps	

Applicable JPEG file	Remarks
Normal playback Upper limit: 6,300 x 5,100 dots Lower limit: 32 x 32 dots File size: Max. 5 MB	• A JPEG image that extends beyond the screen is reduced so that it will be displayed within the screen.
Dual playback Upper limit: 4,000 x 4,000 dots Lower limit: 32 x 32 dots File size: Max. 3 MB	

Hint

- Some selections may take a while to be recognised.
- Press **TITLE** to return to the 1st item.
- Press **MENU** or **RETURN** to go back to the opening display.
- Folders are known as Groups; files are known as Tracks.
- Folders, MP3 files and JPEG files are displayed respectively as , and .
- A maximum of 255 folders or 999 files may be recognised in one disc.
- Up to 8 hierarchies can be recognised in one folder. Files in the 9th or deeper hierarchies cannot be played back.
- This VCR/DVD can play back images and sounds from data recorded in MP3 and JPEG formats on CD-RW/-R discs.
- A file with an extension of ".mp3 (MP3)" is called an "MP3 file".
- A file with an extension of ".jpg (JPG)" or ".jpeg (JPEG)" is called a "JPEG file".
- The VCR/DVD can run an image file conforming to the Exif specification. Exif is a file format, Exchangeable Image File format established by Japanese Electronic Industry Development Association (JEIDA).
- Files whose extension is other than ".mp3 (MP3)", ".jpg (JPG)" and ".jpeg (JPEG)" will not be listed in the MP3 or JPEG menu.
- If the file is not recorded in MP3 or JPEG format, noise may be produced even if the file extension is either ".mp3 (MP3)", ".jpg (JPG)" or ".jpeg (JPEG)".
- The name of group and track can be displayed in up to 25 characters. Unrecognisable characters will be replaced with asterisks.
- Unplayable groups or tracks may be displayed depending on the recording conditions.
- If **TITLE** is pressed when a FILE LIST is displayed, the 1st item will be highlighted.
- Progressive JPEGs (JPEG files saved in the progressive format) will not play on this VCR/DVD.

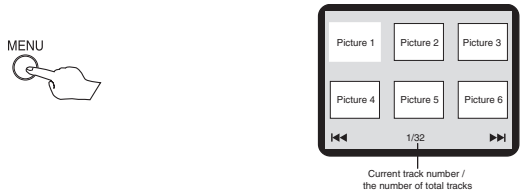
Kodak Picture CD

JPEG press DVD first.

The VCR/DVD can also run JPEG files stored on Kodak Picture CDs. The Picture CD is a service to convert photographs taken by a conventional film camera into digital data and write the data on a CD. The user can enjoy picture images on the television set by playing back the Picture CDs.

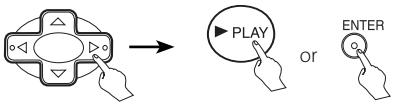
For details of Kodak Picture CD, contact a shop that deals with developing service of Kodak Inc.

1.



- If all menu items cannot be displayed in the screen scope, "▶▶|" appears at the right bottom of the screen, indicating that the user can view remaining items on the next page. "|◀◀" appears, it indicates that the user can view other items on the previous page. The track number of the currently highlighted item and the total tracks are shown at the centre bottom of the screen.
- If "▶▶|" is shown at the right bottom, use **SKIP ▶▶|** to view the next page. If "|◀◀" is shown at the left bottom, use **SKIP |◀◀** to view the previous page.
- It may take some time until all menu items are displayed on the menu screen.

2.



To select a desired track. To play back.

- If a Kodak Picture CD file is selected, an image will be played back from the selected track and go to the next one in turn.

Hint

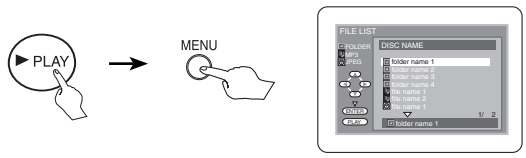
- A track is displayed for 5 seconds and then the next track is displayed.
- Every press on **Cursor ▶** will turn the image clockwise by 90 degrees when an image is displayed. A press on **Cursor ◀** will turn the image counterclockwise by 90 degrees.
- If a group is selected, press **Cursor ▲ / ▼** to select a desired group, then press **Cursor ▶**, **PLAY ▶** or **ENTER** to select a track.

Dual Playback

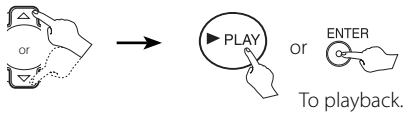
MP3 JPEG press DVD first.

This function lets you play back MP3 and JPEG files simultaneously. Available only when Dual Playback is ON. See pages 30, 33 on how to set the Dual Playback ON or OFF.

1.



2. To select a desired MP3 or JPEG file from the FILE LIST.



To playback.

Hint

- To cancel Dual Playback, press **MENU** again at step **1**.
- If you press **PLAY** ► directly after you inserted a disc which contains both MP3 tracks and JPEG files and if the "DUAL PLAYBACK" setting is "ON", Dual Playback will start automatically.
- If you press **FWD** ►► or **REV** ◄◄ during Dual Playback, a JPEG file will be paused.
- Zooming or rotating a JPEG file during Dual Playback may cause an intermittent sound.
- Depending on the data size of each file, Dual Playback may not function properly. (Refer to "Applicable JPEG file" on page 22.)

Transition Mode

JPEG press DVD first.

You can switch to the Transition Mode for JPEG files during playback.

1.

Press **MODE** repeatedly until " JPG " appears.

2. To switch "CUT IN/OUT" or "FADE IN/OUT".

CUT IN/OUT:
The entire image appears in one time.

FADE IN/OUT:
The image appears gradually and then disappears.

3.

Hint

- The Transition mode cannot be switched when it is stopped, or from the FILE LIST screen or the Picture CD menu screen.
- The default setting is "CUT IN/OUT".

Adjustment of Picture Size

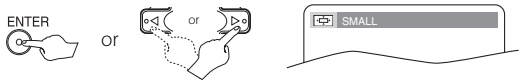
JPEG press DVD first.

Depending on the TV connected to this VCR/DVD, the overall picture cannot be displayed and the edge of the picture can be cut off. In this case, you can adjust the size of the JPEG playback image on screen.

1.

Press **MODE** repeatedly until " " appears.

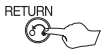
2. To switch "NORMAL" or "SMALL".



NORMAL:
To display the image at 100% of the picture size.

SMALL:
To display the image at 95% of the picture size.

3.



Hint

- The setting screen will not be displayed while in the stop mode or from the FILE LIST.
- This feature may have no effect on some files (e.g. Files with a small picture size).
- The default setting is "NORMAL".

Folder Playback

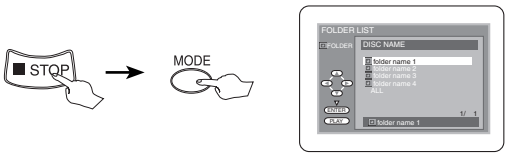
MP3 JPEG press DVD first.

This function lets you play all the files and tracks contained in one selected folder automatically.

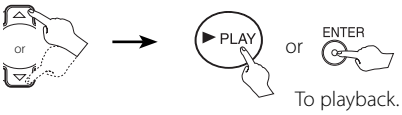
If the folder contains both MP3 and JPEG files, the Dual Playback will begin automatically within that folder.

Available only when Dual Playback is ON. See pages 30, 33 on how to set the Dual Playback ON or OFF.

1.



2. To select a desired folder from the FOLDER LIST.



To playback.

Hint

- To cancel Folder Playback, press **MODE** again at step **1**.
- If you press **FWD** ►► or **REV** ◄◄ during Folder Playback, a JPEG file will be paused.
- Zooming or rotating a JPEG file during Folder Playback may cause an intermittent sound.
- Depending on the data size of each file, Folder Playback may not function properly. (Refer to "Applicable JPEG file" on page 22.)

DivX® Playback

press DVD first.

This VCR/DVD can play back DVD-RW/-R and CD-RW/-R discs recorded in DivX® Format. When a DVD-RW/-R or CD-RW/-R with DivX® files is inserted in the DVD player and the **MENU** is pressed, the FILE LIST will appear. The number of tracks will be also displayed on the front panel.

1. Press **Cursor ▲ / ▼** to select the desired group (folder) or track.
- To return to the previous screen, press **Cursor ◄**.
- If a group (folder) is selected, press **Cursor ►** or **ENTER** to go on to the track selection screen. Press **Cursor ▲ / ▼** to choose a track, then press **PLAY ►** or **ENTER**.
- If a track is selected, press **PLAY ►** or **ENTER** to start playing back tracks. The selected track and the subsequent tracks will be played back.
- When selecting the folders:
  – Press **Cursor ►** when you want to go to the next hierarchy.
  – Press **Cursor ◄** when you want to go back to the previous hierarchy (except for the top hierarchy).
- Press **TITLE** to return to the first item.

2. Press **STOP ■** to stop playback.

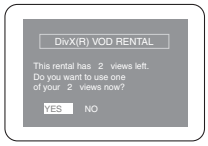
Applicable DivX® file		Remarks
Playable Codec of AVI files	DivX®3.1.1, DivX®4.x, DivX®5.1.1	• They are recognised as MPEG4.
Maximum size of image	720 x 480 @30 fps 720 x 576 @25 fps	• When you made DivX® files on a CD-RW/-R, the recommendation maximum size of image is 480 x 260 @ 24 fps.
Sampling frequency of audio	8 kHz - 48 kHz	• It is prohibited to record MP3 sound on a digital device when the connection is made digitally.
Audio type	MPEG1 audio layer 3 (MP3) MPEG1 audio layer 2	• MP3 files recorded at fixed bit rate of 32 kbps or higher are recommended

- Constant bit rate of image between 500 kbps and 3000 kbps is recommended if you make DivX® files on a CD-RW/-R.

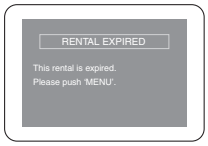
Hint for the purchased or rental official DivX Certified™ product

- When you purchased or rental a DivX® file through the official site of DivX® Video which is called DivX® Video-On-Demand (VOD) services, a registration code is required every time you get the new file from the DivX® VOD services. Refer to "OTHERS setting" on page 33.

- Some DivX® VOD files are restricted with the limited playable times (you cannot play them back beyond the limit). If your DivX® VOD file has such limit, the playback confirmation screen will appear. Use **Cursor ◄ / ►** to select "YES" if you want to play back the file, or to select "NO" if you do not wish to play it back. Then, press **ENTER** to confirm the selection.

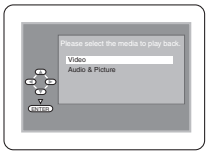


- You cannot play back the DivX® VOD files, of which rental period has been expired. In such case, press **MENU** and select other files that can be played back.

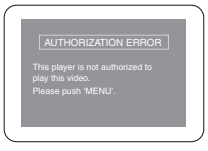


Hint

- DivX® is a codec (compression/decompression) that can compress images to a very small amount of data. The software can compress video data from almost any sources to the size that can be sent on the Internet without compromising visual quality of the images.
- A file with an extension of ".avi" and ".divx" is called an DivX® file. All files with the ".avi" extention are recognised as MPEG4.
- Files whose extension other than ".avi" and ".divx" will not be listed on the DivX® menu. However, unplayable groups or tracks may be displayed, depending on the recording conditions.
- Even if the file has an extension of either ".avi" and ".divx", this VCR/DVD cannot play it back if it is recorded in the format other than DivX®.
- Folders are known as Groups; files are known as tracks.
- A symbol of is shown on the top of the group name.
- A maximum of 255 folders or 999 files may be recognised in one disc.
- Up to 8 hierarchies can be recognised in one folder. Files in the 9th or deeper hierarchies cannot be played back.
- If the track extends beyond the scope of screen, a down arrow "▼" appears, indicating that the user can view another part on the previous page. The current page number and the number of total pages are shown on the left of the down arrow "▼".
- The name of group and track can be displayed up to 25 characters. Unrecognisable characters will be replaced with asterisks.
- You can play back the disc recorded in multi-session.
- Playback will be paused if the FILE LIST is displayed during the playback.
- It may take a while for audio and images to be output after you inserted a disc and pressed **PLAY ►**.
- When playing back the files recorded in high bit rates, the images can be interrupted in some occasions.
- Although DivX® logo has been obtained for this VCR/DVD, it may not be able to play back some data, depending on the characteristics, bit rates, or audio format settings, etc.
- Use the software recognised by the DivX, Inc. when you make DivX® files.
- A DivX® file whose file size exceeds 2 GB cannot be played back.
- When using tools or utilities to make up DivX® files, read their instruction manual beforehand.
- Never use the MPEG4 tools when you make DivX® files. Otherwise, noise or disturbance of the picture and sound may be generated.
- If a large-sized DivX® file is selected, it may take a while to start the playback (over 20 seconds sometimes).
- If DivX® files written on CD discs cannot be played back, rewrite them on a DVD disc and try to play back.
- For more information for DivX®, please visit http://www.divx.com.
- If you insert a CD-RW/-R with DivX® files that are mixed with MP3 and JPEG files, the Playback Media Selection screen will be displayed. Please select "Video" and proceed to step **1**.



- Press **TITLE** to call up the Playback Media Selection screen in stop mode.
- If you select "Audio & Picture", instead of "Video" on the Playback Media Selection screen, the VCR/DVD can play back MP3/JPEG files. Refer to page 22 for details.
- You cannot play back the DivX® VOD files obtained with different registration codes on this VCR/DVD. Press **MENU** and select other files that can be played back.

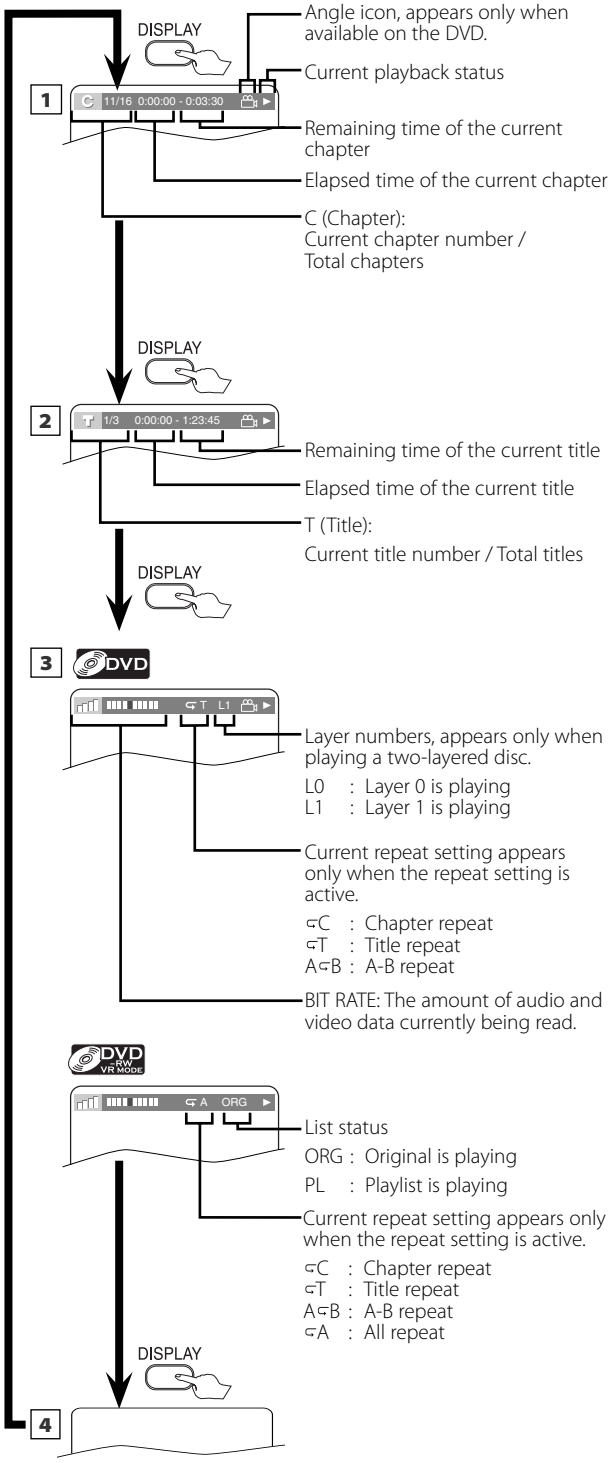


DVD Functions

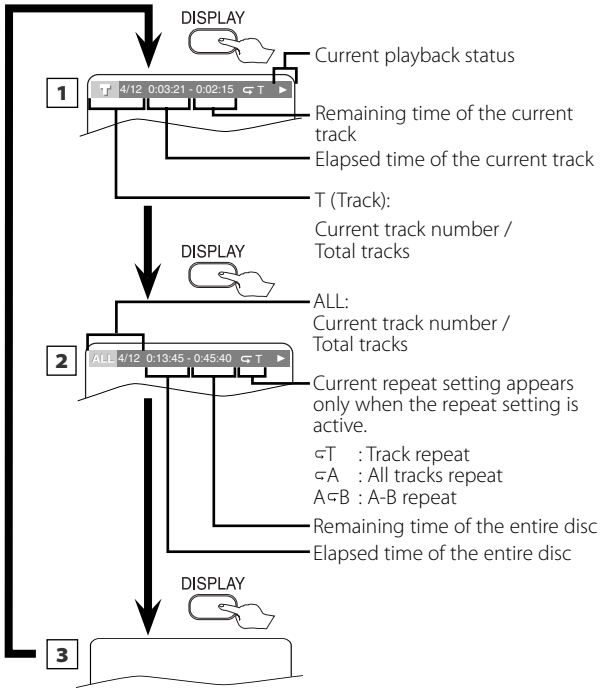
On-Screen Display

You can check the information about the current disc by pressing **DISPLAY** on the remote control.

DVD / DVD RW VR MODE — press DVD first.


DISPLAY
1
C 11/16 0:00:00 - 0:03:30
Angle icon, appears only when available on the DVD.
Current playback status
Remaining time of the current chapter
Elapsed time of the current chapter
C (Chapter):
Current chapter number / Total chapters
DISPLAY
2
T 1/3 0:00:00 - 1:23:45
Remaining time of the current title
Elapsed time of the current title
T (Title):
Current title number / Total titles
DISPLAY
3
DVD
T L1
Layer numbers, appears only when playing a two-layered disc.
L0 : Layer 0 is playing
L1 : Layer 1 is playing
Current repeat setting appears only when the repeat setting is active.
⊂C : Chapter repeat
⊂T : Title repeat
A⊂B : A-B repeat
BIT RATE: The amount of audio and video data currently being read.
DVD RW VR MODE
A ORG
List status
ORG : Original is playing
PL : Playlist is playing
Current repeat setting appears only when the repeat setting is active.
⊂C : Chapter repeat
⊂T : Title repeat
A⊂B : A-B repeat
⊂A : All repeat
DISPLAY
4

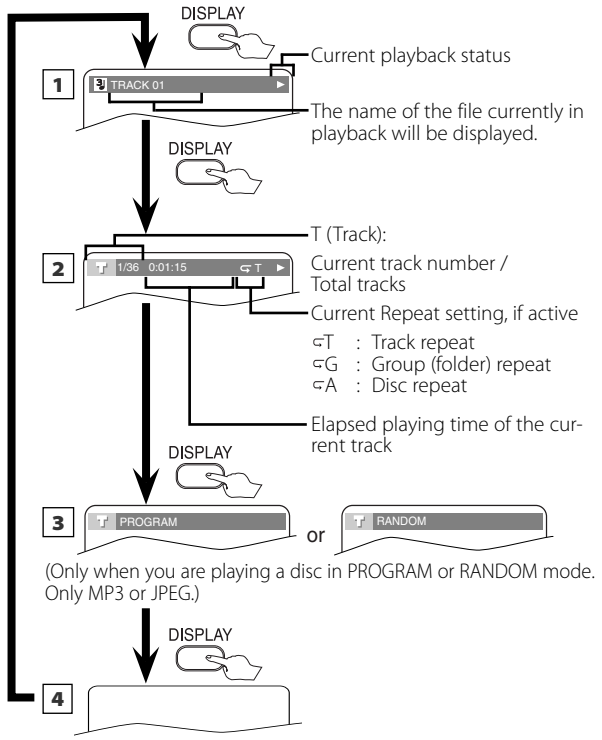
CD / VCD WITHOUT PBC — press DVD first.


DISPLAY
1
T 4/12 0:03:21 - 0:02:15 ⊂T
Current playback status
Remaining time of the current track
Elapsed time of the current track
T (Track):
Current track number / Total tracks
DISPLAY
2
ALL 4/12 0:13:45 - 0:45:40 ⊂T
ALL:
Current track number / Total tracks
Current repeat setting appears only when the repeat setting is active.
⊂T : Track repeat
⊂A : All tracks repeat
A⊂B : A-B repeat
Remaining time of the entire disc
Elapsed time of the entire disc
DISPLAY
3

Hint

- When you are playing a disc in PROGRAM or RANDOM mode, "T PROGRAM" (or "RANDOM") will be displayed instead of 2.

DivX / MP3 / JPEG — press DVD first.



Hint

- When the Dual Playback is "ON", MP3 and JPEG file name will be displayed.

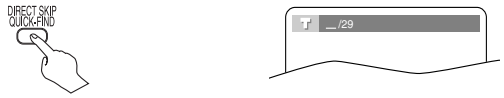
Track Search

DivX CD VCD WITHOUT PBC MP3 JPEG

press DVD first.

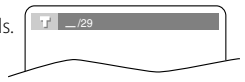
Using DIRECT SKIP

1.



2.

① ② ③
④ ⑤ ⑥ Within 30 seconds.
⑦ ⑧ ⑨
⓪ +10



Hint

- For the discs with less than 10 tracks, press the track number directly.
- **+10** button can also bring up the Track Search display.
- For discs with 10 or more but less than 100 tracks, to play a single-digit track, press **0** first, then the track number (e.g. for track 3, press **0**, **3**). To play a double-digit track, press the track number.
- For discs with 100 or more tracks, to play a single or a double-digit track, press **0** first, then the track number (e.g. for track 26, press **0**, **2**, **6**). To play a triple-digit track, press the track number.

Using SKIP ⏮ / ⏭

1.

Hint

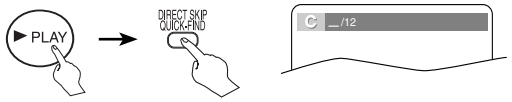
- **SKIP ⏮ / ⏭** are not available when playback is stopped.

Title / Chapter Search

DVD DVD -RW VR MODE press DVD first.

Using DIRECT SKIP

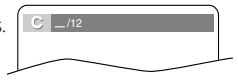
1.



Press **DIRECT SKIP** once for the Chapter Search.
Press **DIRECT SKIP** twice for the Title Search.

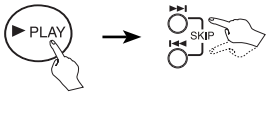
2.

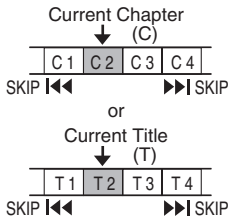
① ② ③
④ ⑤ ⑥ Within 30 seconds.
⑦ ⑧ ⑨
⓪ +10



Using SKIP ⏮ / ⏭

1.





(If the disc has no chapters.)

Hint

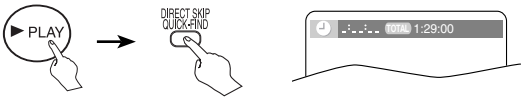
- Depending on the disc being played, this function can also be performed by directly entering the desired chapter number with **the Number buttons**. Refer to the manual accompanying the disc.
- For Audio CDs and MP3, Track Search is not available for Programmed or Random Playback.

Time Search

DVD DVD -RW VR MODE DivX CD VCD WITHOUT PBC

press DVD first.

1.



Press **DIRECT SKIP** repeatedly until "🕘" appears.

2.

① ② ③
④ ⑤ ⑥ Within 30 seconds.
⑦ ⑧ ⑨
⓪ +10

Hint

- When there is no need to enter a number, "0" appears automatically. For example, "0: 0_ : _ _" appears in the Time Search display if the total time of the title or track is less than 10 minutes.
- Press **CLEAR/C-RESET** to erase the incorrect input at step **2**.
- For some DivX® files, Time Search may not function.

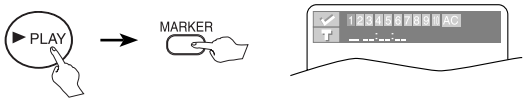
Marker Setup

press first.

This feature allows you to assign a specific point on a disc to be called back later.

To set a marker

1.

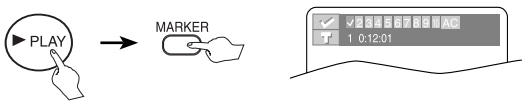


2.

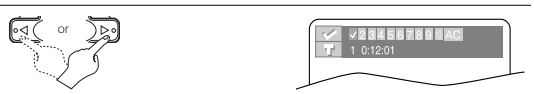
3.

To return to the marker later

1.



2.



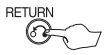
3.

At the desired marker

- Playback will restart from the specific point which you set.

To exit the Marker display

1.



Hint

- The Marker display will disappear in about 30 seconds when there is no input.
- To clear a marker, select the marker to be cleared at step **2** in the section "To set a marker" or "To return to the marker later", and then press **CLEAR/C-RESET**.
- Opening the disc tray or turning off the power will erase all markers.
- Selecting "AC" at step **2** in the section "To set a marker" or "To return to the marker later" will also erase all markers.
- You can mark up to 10 points.

Repeat / Random / Programmed Playback

Repeat Playback

press first.

Repeat function is available only during playback.

1.

Each time you press **REPEAT**, repeat function changes as examples below.

DVD

- **OFF** (repeat **off**)
- **CHAPTER** (**current chapter** repeat)
- **TITLE** (**current title** repeat)

DVD VR MODE

- **OFF** (repeat **off**)
- **CHAPTER** (**current chapter** repeat)
- **TITLE** (**current title** repeat)
- **ALL** (**entire disc** repeat)

CD, VCD

- **OFF** (repeat **off**)
- **TRACK** (**current track** repeat)
- **ALL** (**entire disc** repeat)

DivX, MP3, JPEG

- **OFF** (repeat **off**)
- **TRACK** (**current track** repeat)
- **GROUP** (**current group** repeat)
- **ALL** (**entire disc** repeat)

Hint

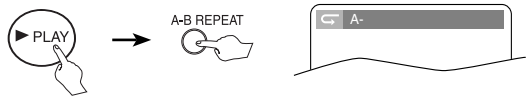
- Repeat setting will be cleared when moving to another title, chapter, track or group.
- Repeat playback may not function with some discs or during Repeat A-B Playback.

Repeat A-B Playback

DVD | DVD RW VR MODE | DivX | CD | VCD

press DVD first.

1.



At your desired starting point (A)

2.

At your desired end point (B)

• Point B should be in the same title or track as point A.

Hint

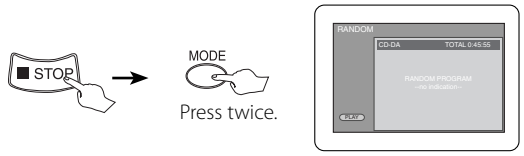
- To exit the sequence, press **A-B REPEAT** so that "OFF" appears.
- To cancel Point A, press **CLEAR/C-RESET**.
- This function does not work in the other repeat modes.
- For some DivX® files, Repeat A-B Playback may not function.

Random Playback

CD | MP3 | JPEG | press DVD first.

This function shuffles the playing order of tracks instead of playback in the sequence.

1.



2.

Hint

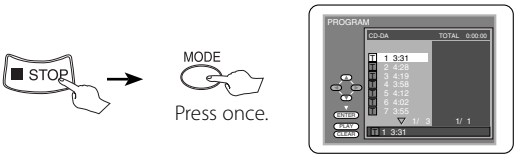
- To repeat the current track in the random selections, press **REPEAT** repeatedly until "TRACK" appears during playback.
- To repeat the entire random selections, press **REPEAT** repeatedly until "ALL" appears during playback.
- Random Playback of MP3 or JPEG is not available while Dual Playback is ON.

Programmed Playback

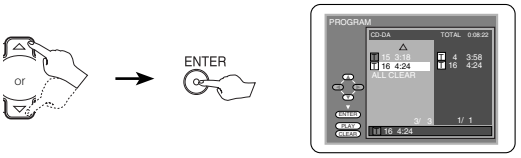
CD | MP3 | JPEG | press DVD first.

You may determine the order in which tracks will play.

1.

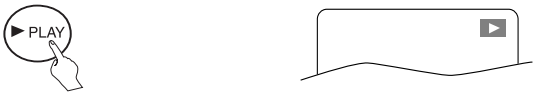


2.



- Up to 99 tracks can be ordered.
- If 8 or more tracks were in a programme, use **SKIP |◀◀ / ▶▶|** to see all the tracks.
- While a MP3 or JPEG folder is open:
  - Press **Cursor ▶** when you want to go to the next hierarchy.
  - Press **Cursor ◀** when you want to go back to the previous hierarchy (except for the 1st hierarchy).
  - Press **TITLE** when you want to go back to the 1st hierarchy.

3.



Hint

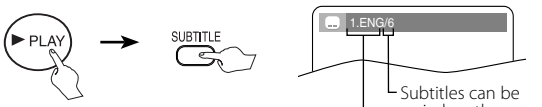
- Press **CLEAR/C-RESET** at step **2** to erase the most recently entered track.
- To erase all programmed tracks at once, select "ALL CLEAR" and press **ENTER** at step **2**.
- While a programme is being played back, **STOP ■** works as follows:
  - Press **STOP ■** and **PLAY ▶** next, so that the programmed playback restarts. (CD playback restarts from the current point. MP3 or JPEG playback restarts from the beginning of the current track.)
  - Press **STOP ■** twice and **PLAY ▶** next, so that playback restarts from the first track in the original order. However, your programmed playback can be restarted when you follow the above steps. (Your programmes are still stored until either the disc tray is open or power is turned off.) On some discs, **STOP ■** will not work while the Resume message appears. Please wait until the message disappears.
- To repeat the current track in the programme, press **REPEAT** repeatedly until "TRACK" appears during playback.
- To repeat the entire programme, press **REPEAT** repeatedly until "ALL" appears during playback.
- Programmed Playback of MP3 or JPEG is not available while Dual Playback is ON.

Subtitle Language

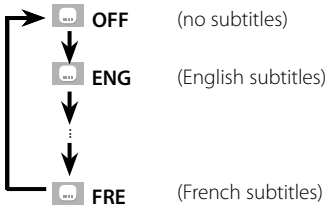
DVD | DVD-RW VR MODE | DivX | press DVD first.

This VCR/DVD allows you to select a subtitle language (if available) during DVD playback.

1.

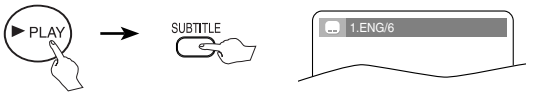


Each time you press **SUBTITLE**, subtitle language changes as example below.



To Set Subtitle ON/OFF

1.



2.

Hint

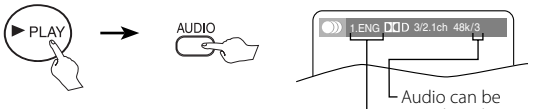
- If your language is not shown after pressing **SUBTITLE** several times, the disc may not have that language. However, some discs allow you to change subtitle languages setting in the disc menu. (Operation varies depending on the disc, so refer to the manual included in the disc.)
- When "NOT AVAILABLE" appears on the TV screen, it means no subtitle is recorded on the scene.
- If you choose a language that has 3-letter-language code, the code will be displayed every time you change the subtitle language setting. If you choose any other languages, "---" will be displayed instead. (Refer to page 35.)
- For discs with DivX® files, the screen only displays the number of subtitle languages.

Audio Language

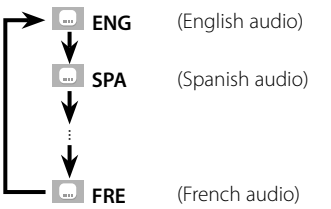
DVD | DVD-RW VR MODE | DivX | press DVD first.

This VCR/DVD allows you to select an audio language (if multiple languages are available) during DVD playback.

1.



Each time you press **AUDIO**, audio language changes as example below.



Hint

- The sound mode cannot be changed during playback of discs not recorded in double sound.
- Audio language selection cannot be made during Rapid Play. (Refer to page 21.)
- If your language is not shown after pressing **AUDIO** several times, the disc may not have that language. However, some discs allow you to change multiple audio languages setting in the disc menu. (Operation varies depending on the disc, so refer to the manual included in the disc.)
- When "NOT AVAILABLE" appears on the TV screen, it means no audio is recorded on the scene.
- If you choose a language that has 3-letter-language code, the code will be displayed every time you change the audio language setting. If you choose any other languages, "---" will be displayed instead. (Refer to page 35.)
- For discs with DivX® files, the screen only displays MP3 or MP2 audio. Other audio sounds will be displayed with "∗ (asterisks)".

For VR mode only:

- Pressing **AUDIO** cycles the sound mode through MAIN, SUB, MAIN + SUB.
- DVD-RW discs recorded in double sound (2 languages) can be played back in either sound mode of MAIN, SUB or MAIN + SUB.
- With discs recorded in VR mode, changing the audio (MAIN, SUB or MAIN+SUB) is effective only when using an analogue connection. Although you may be able to change the settings of the on-screen display, it will not affect the sound when using a digital connection.

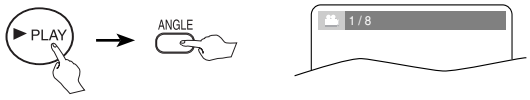
Mode	AUDIO OUTPUT		Display on the TV screen
MAIN	L	Main Audio	MAIN
	R	Main Audio	
SUB	L	Sub Audio	SUB
	R	Sub Audio	
MAIN SUB	L	Main Audio	MAIN+ SUB
	R	Sub Audio	

Camera Angles

DVD | press DVD first.

Some DVD discs may contain scenes which have been shot simultaneously from various angles. You can change the camera angle if "📷" appears on the screen. If the ANGLE ICON setting is "OFF" in the OTHERS menu, "📷" will not appear. (Refer to pages 30, 33.)

1.

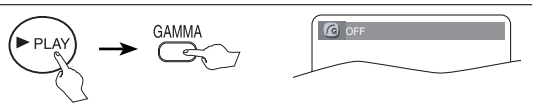


Digital Gamma Setting

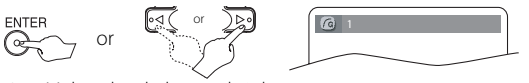
DVD | DVD-RW VR MODE | DivX | VCD | press DVD first.

DIGITAL GAMMA is a digital image quality enhancement function that gives a richer image by brightening the darker and more obscure portions of the image without altering the brightness of the brighter portions thereby making the entire image easier to see. Three digital gamma settings are available to allow for differences in the images played and in brightness of the room.

1.

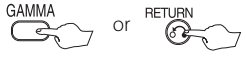


2.



1, 2, 3 : Makes the dark parts brighter.
OFF : Shows the original picture as recorded.

3.



Hint

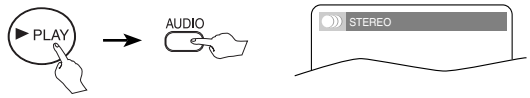
- The setting will be kept even if the VCR/DVD is turned off.
- This function cannot be used during Rapid Play.

Stereo Sound Mode

CD VCD press DVD first.

This VCR/DVD allows you to select a sound mode during CD playback.

1.



Each time you press **AUDIO**, sound mode changes as example below.

STEREO (Right and left channels are active.)
L-ch (Left channel is active.)
R-ch (Right channel is active.)

Hint
- Virtual Surround cannot be changed when the sound mode is set to either L-ch or R-ch.
- Stereo Sound Mode is not available on DTS CD.

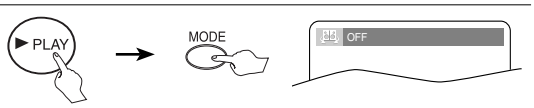
Virtual Surround

DVD DVD RW VR MODE CD VCD MP3

press DVD first.

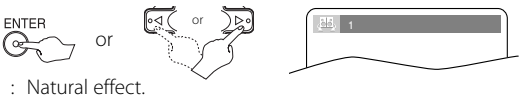
You can enjoy stereophonic virtual world on your existing 2 channel stereo system.

1.



Press **MODE** repeatedly until "3D" appears.

2.



1 : Natural effect.
2 : Emphasised effect.
OFF : No effects (original sound).

3.

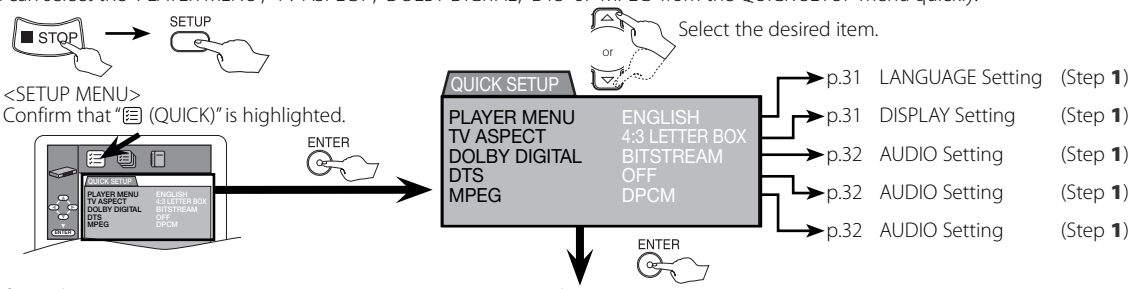
Hint
- The setting will be kept even if the VCR/DVD is turned off.
- On Audio CDs and Video CDs, Virtual Surround will not be effective if the sound mode is set to something other than "STEREO". Refer to "Stereo Sound Mode".
- Turn down the level or select "OFF" if the sound is distorted.
- This function cannot be used during Rapid Play.

DVD Setup

QUICK SETUP Menu

press DVD first.

You can select the "PLAYER MENU", "TV ASPECT", "DOLBY DIGITAL", "DTS" or "MPEG" from the QUICK SETUP menu quickly.



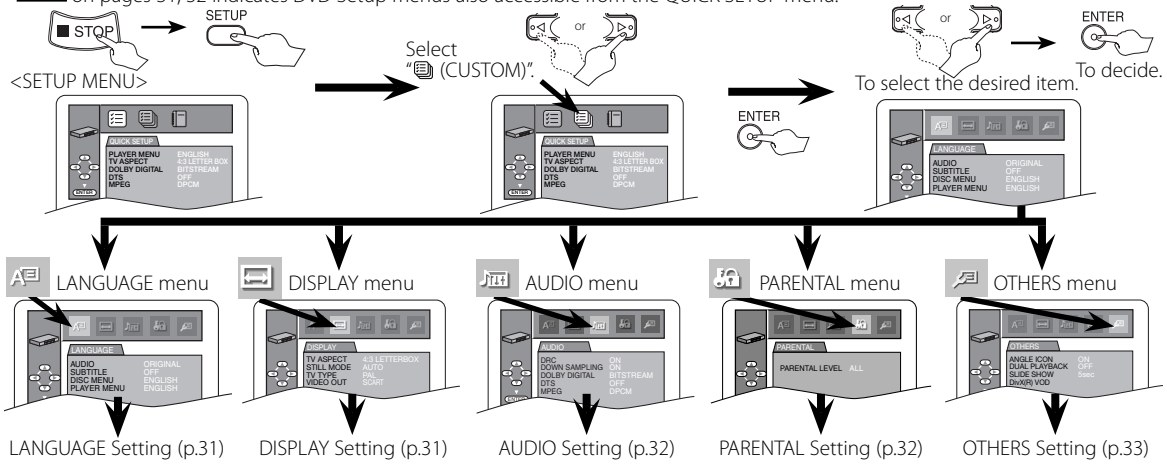
• Refer to the sections "PLAYER MENU" or "TV ASPECT" on page 31 and "DOLBY DIGITAL", "DTS" or "MPEG" on page 32.

CUSTOM Menu

press DVD first.

You can change the settings of the VCR/DVD.

• QUICK on pages 31, 32 indicates DVD Setup menus also accessible from the QUICK SETUP menu.

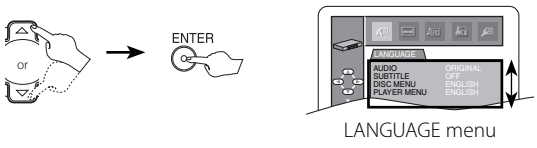


DVD Functions

LANGUAGE Setting

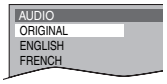
Follow the steps in the "CUSTOM Menu" on page 30.

1. Select the desired item.

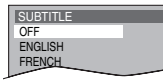


LANGUAGE menu

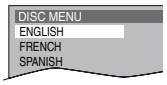
AUDIO: ✻1 ✻2
(Default: ORIGINAL)
Sets the audio language.



SUBTITLE: ✻1 ✻2
(Default: OFF)
Sets the subtitle language.

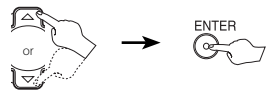


DISC MENU: ✻1
(Default: ENGLISH)
Sets the language in DVD menu.

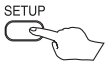


PLAYER MENU: QUICK
(Default: ENGLISH)
Sets the language for the On-Screen Display.

2. Select the desired language.



3. To exit the menu.



Hint

✻1

- Language options are not available with some discs.
- If "OTHER" is selected in the AUDIO, SUBTITLE or DISC MENU screen, press four-digit number to enter the code for the desired language. (Refer to "LANGUAGE LIST" on page 35.)
- Only the languages supported by the disc can be selected.

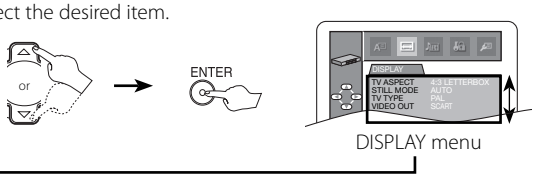
✻2

- Language Setting for Audio and Subtitle are not available with some discs. Then use **AUDIO** and **SUBTITLE**. Details are on page 29.

DISPLAY Setting

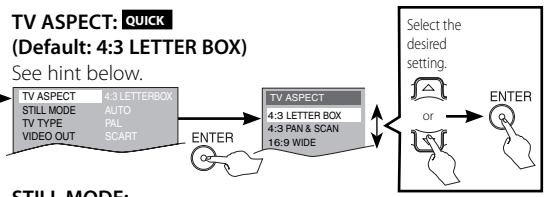
You can change the display functions. Follow the steps in the "CUSTOM Menu" on page 30.

1. Select the desired item.

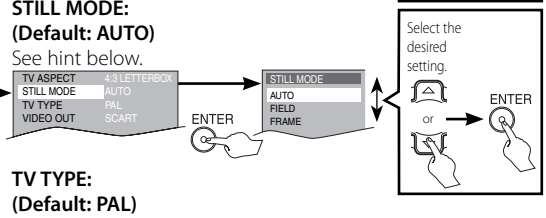


DISPLAY menu

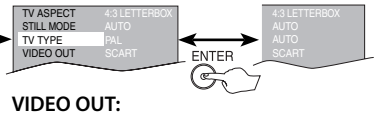
TV ASPECT: QUICK
(Default: 4:3 LETTER BOX)
See hint below.



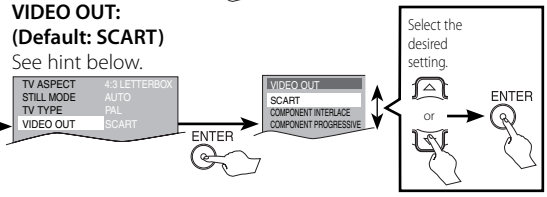
STILL MODE:
(Default: AUTO)
See hint below.



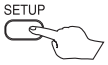
TV TYPE:
(Default: PAL)
See hint below.



VIDEO OUT:
(Default: SCART)
See hint below.



2. To exit the menu.



Hint

TV ASPECT:

- Select "4:3 LETTER BOX", so that black bars may appear on the top and bottom of the screen.
- Select "4:3 PAN & SCAN" for a full height picture with both sides adjusted.
- Select "16:9 WIDE" if a wide-screen TV is connected to this VCR/DVD.

STILL MODE:

- Select "AUTO" usually.
- If you select "FIELD", the picture in the still mode will be stabilised.
- If you select "FRAME", the picture in the still mode will be highly defined.

TV TYPE:

When playing back an NTSC disc:

- If you have a PAL TV, select "PAL"; the modified PAL signal will be output.
- If you have an NTSC TV or multi system TV, select "AUTO"; the NTSC signal will be output.

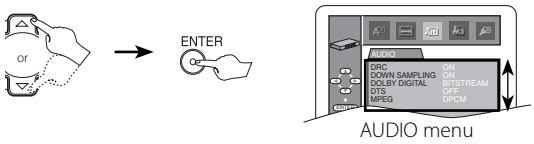
VIDEO OUT:

- Select "SCART" if your TV has a scart terminal and connected to it.
- If your TV that have component jacks, select "COMPONENT INTERLACE (Component (I))" and make sure the connection indicated by each jacks (Y/C_B/C_R) properly.
- If your TV is compatible with progressive scanning, select "COMPONENT PROGRESSIVE (Component (P))" and make sure the connection indicated by each jacks (Y/P_B/P_R) properly. When "Component (P)" is selected, "P.SCAN" will appear on the front panel display.

AUDIO Setting

Choose the appropriate audio settings for your equipments. It only affects during the playback of DVD discs. Follow the steps in the "CUSTOM Menu" on page 30.

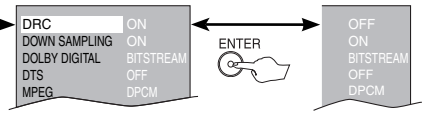
1. Select the desired item.



AUDIO menu

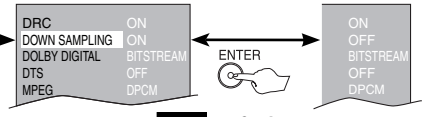
DRC (Dynamic Range Control): (Default: ON)

Set to "ON" to compress the range between soft and loud sounds.



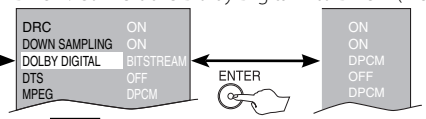
DOWN SAMPLING: (Default: ON)

Set to "ON" when outputting in 48 kHz.
Set to "OFF" when outputting the original sound.



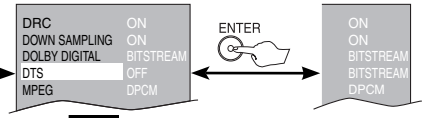
DOLBY DIGITAL: QUICK (Default: BITSTREAM)

Set to "BITSTREAM" when the VCR/DVD is connected to a Dolby Digital receiver.
- BITSTREAM: Outputs a Dolby Digital Signals.
- DPCM: Convert the Dolby Digital into DPCM (2 channel).



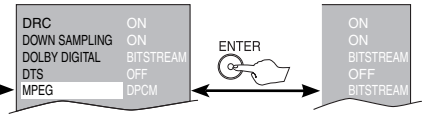
DTS: QUICK (Default: OFF)

Set to "BITSTREAM" when the VCR/DVD is connected to DTS decoder.

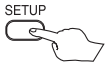


MPEG: QUICK (Default: DPCM)

Set to "BITSTREAM" when the VCR/DVD is connected to MPEG decoder.
- DPCM: Convert an MPEG into DPCM.
- BITSTREAM: Outputs the MPEG Signals.



2. To exit the menu.



Hint

DRC:

- This function is available only to the discs which are recorded in the Dolby Digital format.

DOWN SAMPLING:

- When playing disc with copyright protection, the sound will be down sampled at 48 kHz, even if you set to "OFF".
- This function is available only on digital outputting of a disc recorded in 96 kHz.

PARENTAL Setting

Parental Control limits the disc viewing that exceed your settings. (An incorrect password will not play.)

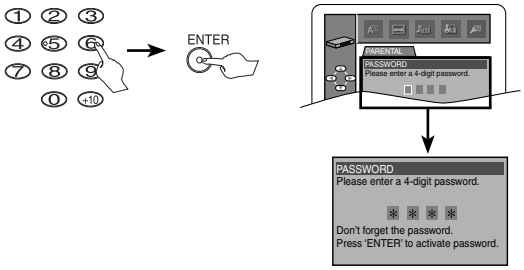
This feature prevents your children from viewing inappropriate materials.

Parental Levels

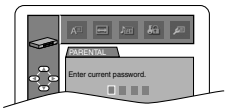
Parental Level allows you to set the rating levels of your DVD discs. Playback will stop if the ratings exceed the levels you set. Follow the steps in the "CUSTOM Menu" on page 30.

1. Enter your desired four-digit password (except for 4737).

PARENTAL menu



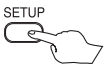
If you have set a password already, enter the current four-digit password.



2. Select "PARENTAL LEVEL".

3. Select the desired level.

4. To exit the menu.



CONTROL LEVELS

- ALL:
  All parental locks are cancelled.
- Level 8:
  DVD softwares of any grades (adult/general/children) can be played back.
- Levels 7 to 2:
  Only DVD softwares intended for general use and children can be played back.
- Level 1:
  Only DVD softwares intended for children can be played back, with those intended for adult and general use prohibited.

Hint

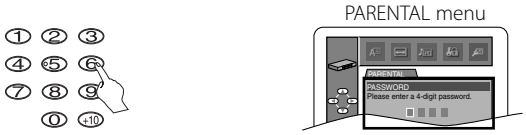
- DVD-Video discs may not respond to the parental lock settings. Make sure this function works with your DVD-Video discs.

DVD FUNCTIONS

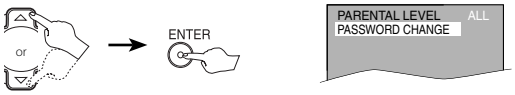
To Change the Password for Parental Controls

You can change your password for parental controls. Follow the steps in the "CUSTOM Menu" on page 30.

1. Enter your desired four-digit password (except for 4737).

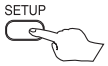


2. Select "PASSWORD CHANGE".



3. Enter your new four-digit password (except for 4737).

4. To exit the menu.



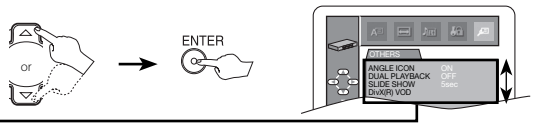
Hint

- Record the password in case you forget it.
- If you forget the password, press **4**, **7**, **3**, **7** at step **1**, then enter your new password.
- Password will be cleared and parental levels will be set to "ALL".

OTHERS Setting

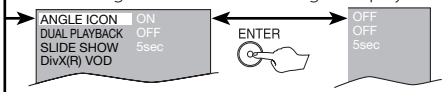
You can change the other functions. Follow the steps in the "CUSTOM Menu" on page 30.

1. Select the desired item.



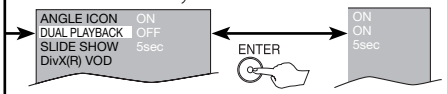
ANGLE ICON: (Default: ON)

Set to "ON" to show the angle icon when multiple camera angles are available during DVD playback.



DUAL PLAYBACK: (Default: OFF)

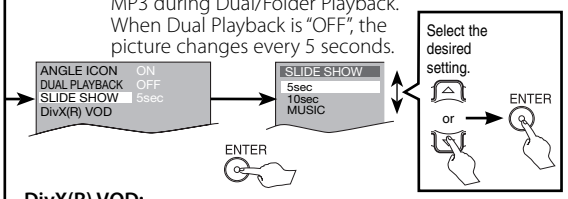
Set to "ON" to play back MP3 and JPEG files simultaneously.



SLIDE SHOW: (Default: 5sec)

Set to the length of displayed JPEG picture.

- 5sec : The picture changes every 5 seconds.
- 10sec : The picture changes every 10 seconds.
- MUSIC : The picture changes according to the change of MP3 during Dual/Folder Playback. When Dual Playback is "OFF", the picture changes every 5 seconds.



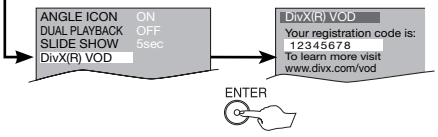
DivX(R) VOD:
Acquire DivX® VOD registration code

This VCR/DVD allows you to play back the files purchased or rented from DivX® Video-On-Demand (VOD) services. The files are available on the internet.

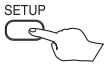
When you purchase or rent DivX® VOD files on the internet, you will be asked to enter a registration code. This menu item provides you with the registration code.

One registration code is only valid for one DivX® VOD file. You must first download the file from the internet and play it back on this VCR/DVD before you are able to get another code. You must follow this step every time you purchase or rent a DivX® VOD file from the internet.

For more information for DivX®, please visit http://www.divx.com/vod.



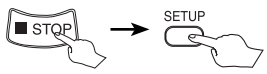
2. To exit the menu.



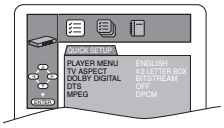
DVD FUNCTIONS

Reset to the Default Setting (except for PARENTAL Setting)

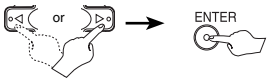
1. Select the desired item.

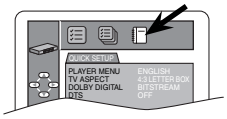


SETUP menu

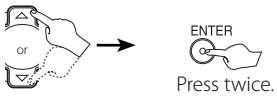


2. Select "(INITIALIZE)".

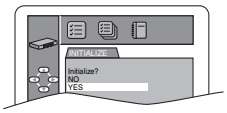




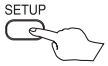
3. Select "YES".



Press twice.



4. To exit the menu.



Hint

• When you cancel to initialise at step **3**, select "NO".

INFORMATION

Language List

Language	Code	Language	Code	Language	Code	Language	Code
A-B		French [FRE]	5264	Macedonian	5957	Siswat	6565
Abkhazian	4748	Frisian	5271	Malagasy	5953	Slovak	6557
Afar	4747	Galician	5358	Malay	5965	Slovenian	6558
Afrikaans	4752	Georgian	5747	Malayalam	5958	Somali	6561
Albanian	6563	German [GER]	5051	Maltese	5966	Spanish [SPA]	5165
Amharic	4759	Greek [GRE]	5158	Maori	5955	Sundanese	6567
Arabic	4764	Greenlandic	5758	Marathi	5964	Swahili	6569
Armenian	5471	Guarani	5360	Moldavian	5961	Swedish [SWE]	6568
Assamese	4765	Gujarati	5367	Mongolian	5960	**T**	
Aymara	4771	Hausa	5447	Nauru	6047	Tagalog	6658
Azerbaijani	4772	Hebrew	5569	Nepali	6051	Tajik	6653
Bashkir	4847	Hindi	5455	Norwegian [NOR]	6061	Tamil	6647
Basque	5167	Hungarian [HUN]	5467	**O-R**		Tatar	6666
Bengali;Bangla	4860	**I-K**		Occitan	6149	Telugu	6651
Bhutani	5072	Icelandic [ICE]	5565	Oriya	6164	Thai	6654
Bihari	4854	Indonesian	5560	Oromo(Afan)	6159	Tibetan	4861
Bislama	4855	Interlingua	5547	Panjabi	6247	Tigrinya	6655
Breton	4864	Interlingue	5551	Pashto;Pushto	6265	Tonga	6661
Bulgarian	4853	Inupiak	5557	Persian	5247	Tsonga	6665
Burmese	5971	Irish [IRI]	5347	Polish	6258	Turkish [TUR]	6664
Byelorussian	4851	Italian [ITA]	5566	Portuguese [POR]	6266	Turkmen	6657
C-E		Japanese [JPN]	5647	Quechua	6367	Twi	6669
Cambodian	5759	Javanese	5669	Rhaeto-Romance	6459	**U-Z**	
Catalan	4947	Kannada	5760	Romanian [RUM]	6461	Ukrainian	6757
Chinese [CHI]	7254	Kashmiri	5765	Russian [RUS]	6467	Urdu	6764
Corsican	4961	Kazakh	5757	**S**		Uzbek	6772
Croatian	5464	Kinyarwanda	6469	Samoan	6559	Vietnamese	6855
Czech	4965	Kirghiz	5771	Sangho	6553	Volapuk	6861
Danish [DAN]	5047	Kirundi	6460	Sanskrit	6547	Welsh	4971
Dutch [DUT]	6058	Korean [KOR]	5761	Scots Gaelic	5350	Wolof	6961
English [ENG]	5160	Kurdish	5767	Serbian	6564	Xhosa	7054
Esperanto	5161	**L-N**		Serbo-Croatian	6554	Yiddish	5655
Estonian	5166	Laothian	5861	Sesotho	6566	Yoruba	7161
F-H		Latin	5847	Setswana	6660	Zulu	7267
Faroese	5261	Latvian;Lettish	5868	Shona	6560		
Fiji	5256	Lingala	5860	Sindhi	6550		
Finnish [FIN]	5255	Lithuanian	5866	Singhalese	6555		

If you choose a language that has a 3 letter language code, the code will be displayed every time you change the Audio or Subtitle Language setting on page 29. If you choose any other languages, "----" will be displayed instead. (3 letter language code is written in bracket.)

Specifications

PRODUCT TYPE

DVD Player with Video Cassette recorder

NUMBER OF VIDEO HEADS

4

VIDEO SIGNAL STANDARD

PAL/MESECAM colour system

AUDIO RECORDING SYSTEM

One Stationary head for liner audio
Two Rotary heads for Hi-Fi stereo

CHANNEL COVERAGE

E2~E69

TIMER BACKUP

60 minutes

DISCS (PLAYBACK COMPATIBILITY)

DVD Video / DVD-RW/-R / DVD+RW/+R / Audio CD / Video CD
CD-RW/-R

FREQUENCY RESPONSE

DVD (linear sound) :	20 Hz to 20 kHz (sample rate: 48 kHz)
	20 Hz to 44 kHz (sample rate: 96 kHz)
CD :	20 Hz to 20 kHz

SIGNAL-TO-NOISE RATIO (S/N RATIO)

CD :	90 dB (JEITA)

DYNAMIC RANGE

DVD (linear sound) :	86 dB
CD :	86 dB (JEITA)

TOTAL DISTORTION FACTOR

DVD :	1 KHz	0.008% (JEITA)
CD :	1 KHz	0.008% (JEITA)

WOW AND FLUTTER

Below the measurement limitation (+/-0.001% W PEAK) (JEITA)

CONNECTIONS

Front panel:	
Video input	One RCA connector
Audio input	Two RCA connectors
Rear panel:	
Audio/Video Output/Input	Two 21 pin scart terminals
Component Video Output	Three RCA connectors
S-Video output	Mini DIN 4-pin jack (75 Ω)
Analogue audio output	Two RCA connectors (one left channel, one right channel) 2 Vrms (47 kΩ)
Coaxial digital audio output	One pin jack, 500 mVpp (75 Ω)

POWER SOURCE

220-240 V ~ +/- 10%, 50 Hz +/- 0.5%

POWER CONSUMPTION

25 W (standby: 5.5 W)

OPERATING TEMPERATURE

5°C to 40°C

DIMENSIONS

W: 435 mm H: 94 mm D: 233 mm

WEIGHT

Approx 3.2 kg

• Designs and specifications are subject to change without notice.

Troubleshooting Guide

If this VCR/DVD does not perform properly when operated as instructed in this Operation Manual, check this VCR/DVD consulting the following checklist.

	PROBLEM	CORRECTIVE ACTION
DVD VCR	No power.	• Make sure the power plug is connected to an AC outlet. • Make sure the power is turned on.
DVD VCR	This VCR/DVD does not respond to the remote control.	• Check if the power plug is connected to an AC outlet. • Check the batteries in the remote control. • Aim the remote control directly at the remote sensor. If necessary, remove all the obstacles between the sensor and the remote. • You have to be within 7 m (23 feet) of this VCR/DVD. • Check if the right mode is selected. If it's not in the right mode, press **DVD** or **VCR**, whichever you need, on the remote control. • Check if a cassette tape is in this VCR/DVD.
VCR	Timer Recording is impossible.	• Make sure the Timer Recording is set correctly. • Make sure the TIMER indicator and " ◷ " appear on the VCR/DVD. If not, press **TIMER ON/OFF**. • Make sure the VCR/DVD clock is set correctly.
	Cannot go into record mode.	• Make sure the tape has erase-protection tab. If needed, cover the hole with plastic tape. • Activate this VCR/DVD in VCR mode. Press **VCR** on the remote control so that the VCR OUTPUT indicator is lit.
	Playback picture is partially noisy.	• Adjust tracking control for a better picture by pressing **CH ▲ / ▼** on the VCR/DVD or **CH ▲ / ▼** on the remote control.
	Cannot view a tape but the audio is OK.	• Head cleaning may be necessary. Refer to "Auto Head Cleaning" on page 4. • Make sure the VCR is not in the Menu mode.
	No, or poor, playback picture.	• Fine tune your TV.
	TV programmes cannot be seen normally.	• Re-check the AERIAL and RF OUT connections. See page 10. • Press **VCR**. • Press **VCR** on the remote control to activate it in the VCR mode. Check if the VCR OUTPUT indicator is lit.
	Video or colour fades in and out when making a copy of a video tape.	• You cannot copy a copyrighted video tape. You are experiencing copy guard protection.
	The VCR/DVD turns off automatically after the Timer Recording standby mode is set.	• Depending on the circumstance of the Timer Recording standby mode, the VCR/DVD may be automatically turned off, instead of changing to the DVD mode. This is not a malfunction. Turn on the VCR/DVD if you want to use the DVD after this happens.
DVD	No picture.	• Connect the video cable firmly. • Insert a correct video disc that plays on this VCR/DVD. • Press **DVD** on the remote control. Check if the DVD OUTPUT indicator is lit. Then try other DVD features.
	Disc cannot be played.	• Insert the disc. • Clean the disc. • Place the disc correctly with the label side up. • Cancel the parental lock or change the control levels. • Handle a disc with special care so that it does not have fingerprints, scratches, or dusts on its surface. • If the recorded portion of the disc is too small (less than 55 mm across), it may not play back properly.
	No sound.	• Connect the audio cable firmly. • Turn the power of the audio component on. • Correct the audio output settings. • Correct the input settings on the audio component.
	No DTS audio is output.	• Use a DIGITAL AUDIO OUT jack when outputting the DTS audio.
	Distorted picture.	• Connect this VCR/DVD directly to the TV. • There are some cases where picture may be slightly distorted, and those are not a sign of a malfunction. • During the playback of a 2-layered disc, pictures may stop for a moment. This happens while the 1st layer is being switched to the 2nd layer. This is not a malfunction. • Check if the INTERLACE/PROGRESSIVE mode is set correctly according to your TV. See page 10. • Make sure the VIDEO OUT is set correctly. See page 31. • This happens right after fast forwarding or rewinding. This is not a malfunction.
	Audio or subtitle language does not match the set up.	• The selected language is not available for audio or subtitles on the DVD. This is not a malfunction.
	The camera angle cannot be changed.	• The DVD does not contain sequences recorded from different camera angles. This is not a malfunction.
	Audio or subtitle language cannot be changed.	• The DVD does not contain audio source or subtitles in the selected language. This is not a malfunction.
	"Prohibited icon" appears on the screen, prohibiting an operation.	• That operation is prohibited by this VCR/DVD or the disc. This is not a malfunction.

• Some functions are not available in specific modes, but this is not a malfunction. Read the description in this Operation Manual for details on correct operations.
• Playback from a desired track and random playback are not available during programmed playback.
• Some functions are prohibited on some discs.

A. Information on Disposal for Users (private households)

1. In the European Union

Attention: Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.
Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.
*) Please contact your local authority for further details.

If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other Countries outside the EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

For Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the homepage of www.swico.ch or www.sens.ch.

B. Information on Disposal for Business Users

1. In the European Union

If the product is used for business purposes and you want to discard it:

Please contact your SHARP dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain: Please contact the established collection system or your local authority for take-back of your used products.

2. In other Countries outside the EU

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.

SHARP

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